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ABSTRACT

A study of humanities programs for young people in twenty-four American museums was prompted by an awareness of the need for up-to-date descriptive materials about current museum education practices. The choices of museum programs studied were determined by indications of success in working with the schools, in developing effective teaching materials and methods, in recruiting and training personnel, in funding expanding programs, and in reaching into the community. The study is in two parts. Part One is a set of fourteen case studies, each of which analyzes the program of a single museum under eight subject headings. These follow identical schemes to facilitate comparisons and are arranged geographically. Part Two discusses, under the same subject headings (exhibits, programs, extension services, staff, funding, coordination with schools, facilities, and publications), programs of special interest that did not lend themselves to the case study format. Notes on inter-museum cooperation, further information resources, references and illustration credits conclude the study. (Author/KSM)

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Museum Programs for Young People

CASE STUDIES

Ann Bay

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This study was sponsored by the Smithsonian Institution and made possible by a grant from the National Endowment for the Humanities. The author's findings and conclusions, however, do not necessarily reflect the views of the Smithsonian or of the Endowment.

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FOREWORD

This set of case studies of museum education programs was intended primarily for an audience of people already working in the field. Other readers may be somewhat disconcerted, as if, looking for the latest, shiny model, they had wandered into the parts department instead of the showroom. Here there is no salesman and no pretense.

As an advisor to this project, I remember suggesting to the investigator that she go forth and be a camera, thinking that while I knew of many people (including, goodness knows, myself) who have sounded off at great length on the theory of museum education, on what ought to be, I knew of no one who had gotten down on paper some solid descriptions of what is actually going on -- the commonplace as well as the innovative; the whole thing, not just what looks good to the outsider.

This is the very texture of museum education, the daily problems that must be coped with, the little details of coordination, scheduling, and planning that can make the difference between order and chaos. We see people at work, making mistakes, having inspirations, trying to do their jobs, often under difficult circumstances with too little money and not enough staff to meet heavy educational obligations.

The scope was limited by a number of factors, not the least of which was the amount of territory that could be covered by one investigator -- even one as energetic and enthusiastic as Mrs. Bay -- working part time for a year. The project was funded by the National Endowment for the Humanities, and it concentrates on non-art museums with humanities-related programs as defined by the Endowment and on programs for young people. The investigator visited museums suggested to her by a number of experienced museum people as being "interesting" or having aspects that were out of the ordinary, but the selection does not purport to be a list of the twenty-four top programs. Many excellent ones are not here. The selection claims only to be fairly representative. This is a probe and not a broad-scale survey.

It is a fast-changing field. The change is so rapid that more than one of the museums visited early in 1972 had quite different programs and different personnel by the end of the year. In those cases, little effort was devoted to bringing the descriptions up to the minute. Mrs. Bay tells us what she saw with her own eyes at a certain moment in time. She has deliberately avoided judgments and philosophizing (although the temptation must have been great), leaving such matters up to you.

I think Ann Bay did her work well. I read the reports as she brought them in, sometimes from far corners of the country, with pleasure and often with astonishment at the multitude of ingenious ways museum educators and their colleagues in the schools have found to acquaint young people with the marvelous things in museum collections and their meanings, to excite a devotion to learning, to open possibilities.

Richard Grove

PREFACE

This study of humanities programs for young people in twenty-four American museums was prompted by an awareness of the need for up-to-date descriptive material about current museum education practices. The museums were visited in 1972 with the support of a grant from the National Endowment for the Humanities and chosen from recommendations made by presidents and representatives of the United States Regional Conferences of the American Association of Museums and other people with a wide knowledge of the field. The choices were determined by indications of success in working with the schools, in developing effective teaching materials and methods, in recruiting and training personnel, in funding expanding programs, and in reaching into the community. The selection represents a wide geographic spread and a range of sizes, types, budgets, and specialties. The study, however, makes no pretense of being wholly and unerringly representative of the best in museum education programs. In the interest of objectivity, the museums of the Smithsonian Institution, which sponsored the project, were excluded.

The study is in two parts. Part One is a set of fourteen case studies, each of which analyzes the programs of a single museum under eight subject headings. The chapters follow identical schemes to facilitate comparisons and are arranged geographically. Part Two discusses, under the same subject headings, programs of special interest that did not lend themselves to the case study format. The emphasis is on humanities programs as defined by the National Endowment for the Humanities and on programs for young people below the college level.

Before editing, drafts of the case studies were reviewed for accuracy by the museums. A few of the museums suggested material to be added; the suggestions were followed whenever possible within limitations of space and consistency of format. Information about the backgrounds of staff members has been deleted from two of the chapters at the request of the museums.

The intention was to describe well-tried approaches to common problems in the hope that the study will help the many people in American museums who are working in the face of increasing public demands and shrinking financial resources to improve the effectiveness of the museum's role in educating the young.

ACKNOWLEDGEMENTS

Of particular benefit to this project was the help of Mr. Richard Grove of the Smithsonian Institution, who served as the advisor. For additional critical assistance with the manuscript, I am indebted to Mrs. Laura Lou McKie and Mrs. Joan Madden. I also owe thanks to Mr. John Bingham, Mr. Julian Euell, Mr. Carl Frederick Schmid and Mr. Joseph H. Shealy for their continuing interest and support; to Mrs. Dorothy Fisher, Mrs. Hermine Keathley, and Mrs. Mary Williams, who typed the manuscript; to Mr. Stephen Kraft, who designed the cover; and to others at the Smithsonian who helped in various ways -- especially Mr. Philip Babcock, Mr. Robert Harding, Mr. Paul Perrot, Mrs. Marcy Schuck, and Mrs. Elizabeth Sur. Other persons contributing encouragement and good suggestions were Mr. Armen Tashdinian, Mrs. Sally Toney, and Mrs. Deanne H. Winokur of the National Endowment for the Humanities; Mr. Peter Welch of the New York State Historical Association; Mr. Nathaniel Dixon; Mrs. Jean Greenberg; Mr. Edward Lawson; Mr. Samuel Rizetta; and Mrs. Catherine Shimburg. I thank them all, reserving a final measure of gratitude for the many staff members of the museums visited whose willing cooperation made the study possible.

CASE STUDIES

THE CHILDREN'S MUSEUM

Purpose:	To offer "provocative experiences with real materials to children, parents, and teachers."[1]
Governing Authority:	Private.
Location:	Jamaica Plain, a section of Boston.
Community Served:	The greater Boston area.
Year of Founding:	1913
Facilities:	A Visitor Center housing exhibits, an orientation room, a sales shop, and offices; a Resource Center housing collections, a Recycle Museum, meeting rooms, and offices; and a Museum Annex housing an art department and a wood-working shop.
Collections:	History, anthropology, and the natural sciences.
Education Programs:	In-house and extension programs for children and adults are offered through the Museum's Resource Center, Visitor Center, and Community Services Division.
Education Staff:	A senior staff of approximately thirty-four and a "college work-study" staff of approximately twenty.
Hours:	At the Visitor Center, from 2 P.M. to 5 P.M. on school days and from 10 A.M. to 5 P.M. on weekends and school holidays. School-day mornings are reserved for scheduled school groups. At the Resource Center, from 10 A.M. to 6 P.M. daily except Sunday, until 9 P.M. on Thursday.

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[1] Statement taken from "Facts About," a leaflet describing the Museum.

Admission: To the Visitor Center, 75¢ for children, aged three to fifteen, $1.25 for adults; to the Resource Center, free.

Attendance: Approximately 170,000 visitors a year..

For further information, write to Miss Phyllis O'Connell, Associate Director, Children's Museum, Jamaicaway, Boston, Massachusetts 02130

THE CHILDREN'S MUSEUM

The Children's Museum occupies a wooded, two-and-a-half-acre site in Boston's Jamaica Plain. Established in 1913 by the Boston Science Teacher's Bureau as an "educational center for superintendents, teachers, and students," the Museum considers itself a "learning laboratory," where exhibits and programs are developed in response to the children who use them. Activities described in this chapter take place in three buildings -- a Resource Center, a Visitor Center, and a Museum Annex.

Exhibits

Most exhibits are located in the Visitor Center, a remodeled auditorium with a main exhibit area structured of multi-level adjoining exhibit platforms. There, as you walk from one level to the next, you see young visitors manipulating cylindrical devices called zoetropes to discover the principles of animation; filming one another with a television camera and viewing the results; building structures bigger than they are with lightweight recycled materials; playing with small live animals; peering into microscopes; and exploring the changing exhibit area, "What's New?", where themes change every six weeks. Recent "What's New?" exhibits have been "Spinning and Weaving," which featured craftspeople at work and enabled youngsters to use a spinning wheel and a simple loom, and "Hospital," where in a small-sized replica of the real thing, children could have their blood pressures taken, try out wheel chairs and model casts, and talk with medical students from nearby hospitals about medical procedures and techniques.

Upstairs in the Visitor Center is "Grandmother's Attic," a playroom crammed with Victorian dolls, dollhouses, and other toys, woodcarvings, furniture, and household appliances and utensils. In the basement of the Center is a Japanese Teahouse -- a one-room structure with a floor of tatami mats, walls of rice paper, and a small adjoining garden of pebbles and stepping stones.

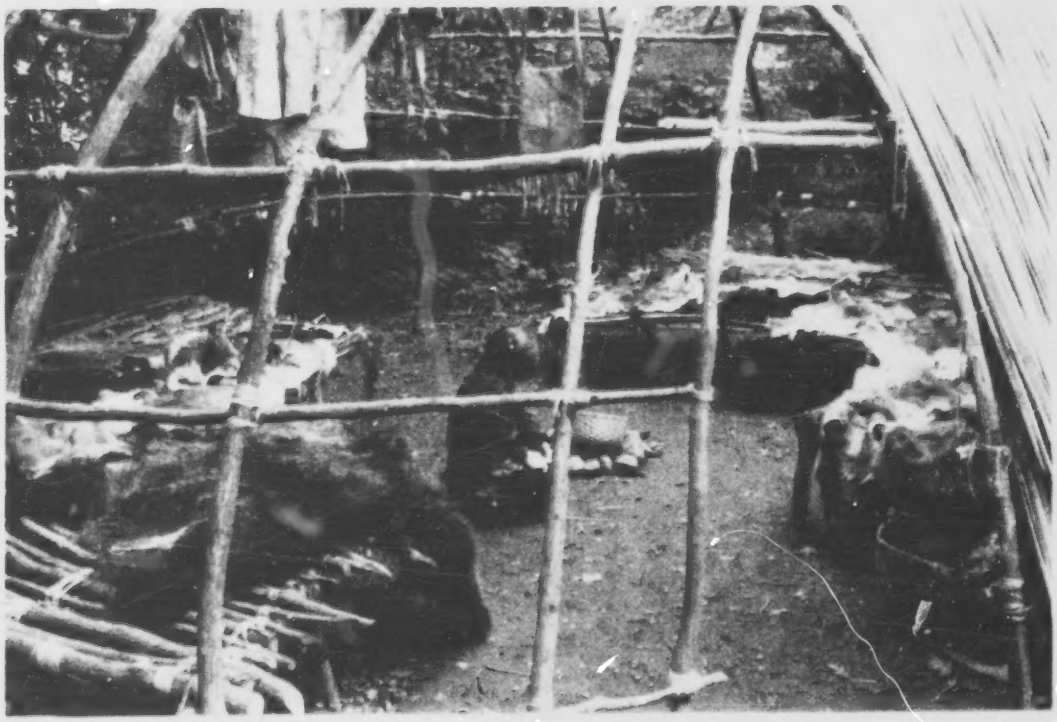
Painted yellow footprints lead from the Visitor Center across a parking lot to an Algonquin Wigwam that stands in a clearing, surrounded by trees. A garden in front of the Wigwam has beans, corn, and squash planted in mounds, Algonquin style. Behind the garden is a drying rack where pieces of cod and eel "smoke" over an unlit fire and next to the rack, a large wooden mortar and pestle made from a hollowed-out tree stump. A vertical rack, to one side of the dwelling, holds an animal skin stretched ready for scraping. Inside, the wigwam is furnished with benches made of sapling poles and covered with animal skins. An assortment of household objects sit on the benches and on the floor and hang from the ceiling. In the center of the room is a small fireplace.

Programs Given in the Museum

School Group Programs

Tuesday through Friday mornings during the school year, college students employed by the Museum conduct programs in the Visitor Center for first-through-fifth-grade classes. The programs are given twice a morning for one-and-a-half-hour periods with about eighty children, all of the same grade level, attending each session. Approximately 19,000 youngsters take part each year.

When participants arrive at the Visitor Center, they are placed in eight groups of no more than twelve, and each group is taken to a different exhibit area for a half-hour activity program. These planned programs are followed by an hour of free time, when the children explore the Museum on their own and staff members are stationed in exhibit areas to answer questions. Program content changes from week to week and day to day. All programs are flexible, informal, and involve children in interaction with exhibit materials. Themes are kept simple to avoid confusing participants.



The Algonquin Wigwam

Algonquin Wigwam Programs. By presenting Indians as "real people" who lived in North America before the arrival of the first white settlers, programs in the Algonquin Wigwam attempt to abolish the stereotyped notions many children have about Indians.

Students and their museum teacher imagine themselves to be early explorers who have come upon a wigwam in the woods. As they approach the dwelling, they notice food "cooking" over the fireplace and other signs of habitation, which lead them to decide that the structure must be "a home." In response to an invitation from an imaginary resident, the youngsters enter the wigwam and examine its contents, trying to identify what they find. Conclusions about the artifacts lead eventually to conclusions about the traditional Algonquin culture as the children work with the objects, doing things as the Algonquins did them in the seventeenth century. Animal skins are scraped with stone scrapers; dried corn ground with the mortar and pestle; nuts cracked between two stones; soapstone carved; moccasins and clothing tried on; and, depending on the season, the garden planted, cultivated, or harvested. As the children work, they discuss with their instructor reasons for the methods used and the resourcefulness of the Indian in his use of natural materials. Sometimes they listen to stories based on diary accounts of early settlers. Before leaving the wigwam, they have a snack of sunflower soup, corn gruel, or other traditional food.

Japanese Teahouse Programs. Like Algonquin Wigwam activities, programs in the Japanese Teahouse have as their intent the replacement of popular misconceptions with a true picture of the culture represented.

At the door of the Teahouse students study a map and photographs of Japan today in order to become acquainted with the country's location and modern styles of dress and architecture. Then they remove their shoes and, with their instructor, enter the house through the garden, taking care to walk only on the stepping stones as is the Japanese custom. Inside the house, they take part in one of a number of activities. On some days they listen

Trying on kimonos, the Japanese Teahouse

Following stepping stones, the Japanese Garden

to a traditional Japanese story, first acting out the narrative with their hands and then creating a mural about the tale for the next class to see. On other days, they make kites or origami, arrange flowers, cook sukiyaki, or try on kimonos. As they work, they talk with their instructor about the meaning of the activity.

Programs in Grandmother's Attic. Programs in Grandmother's Attic concentrate on the period between 1880 and 1930. A session may involve planting herbs and learning about their uses, making clothespin dolls, or playing games popular during the Victorian era. Twice a week, volunteer senior citizens from the community help with the activities. On one day, an eighty-six-year-old expert at making stained glass demonstrates his craft; on the other, a Jewish woman bakes traditional breads, with the children helping to shape and knead the dough.

Methods. School Group Programs and the exhibits in which they take place are developed gradually, in response to interactions between children and materials. From the beginning, the form and content of a developing unit is determined by the reactions of small, informal test groups to individual components of the planned whole. After a component has been tried out, it is revised and then tried again and again until it works.

In The Development of Validated Museum Exhibits, a report describing the evolution of a former exhibit called "Teeth," which was developed and evaluated by the Museum in 1966-68 with a grant from the U.S. Office of Education, Elizabeth Nicol, project director, explains the procedures involved then and now in a "try-out-revise cycle."

> In the earliest stages, the concepts, possible sequences, and potential materials were tried informally with individual children or with small groups. For example, the staff person might take specimens and artifacts for a potential topic into the Museum, where they would soon attract a circle of

> visiting children. Sitting around on the floor, they would explore the various things and wonder over the "why" of some aspects. The staff member would experiment with an approach to the topic concepts, noting the ideas and questions raised by the children, the sources of misunderstanding, and indications of interest or boredom. Variations that did not work were either modified or discarded. A successful technique was pursued with other children, modified, and so on until the script began to take form.[2]

Special Education Program

Every Monday of the school year, two special education groups of fifteen youngsters each, visit the Museum for an hour and a half. Most of the children are from Boston's Clinical Nursery Schools, which teach mentally retarded and emotionally disturbed youngsters between the ages of three and seven. Museum staff members and teachers accompanying the groups work with the children on a one-to-one basis, as each child, followed by an adult, explores areas of the Center that appeal to him.

Informal Programs

Programs for Inner-City Children. On summer weekday mornings, the Visitor Center offers special activities to groups of inner-city youngsters from neighborhood houses and other community centers whose adult leaders have been working throughout the year with the Museum's Community Services Division to develop programs in low-income neighborhoods. Planned jointly by the staff of the Visitor Center, the staff of Community Services, and leaders of participating groups, the activities augment other projects taking place outside the Center. During the summer of 1972, four groups of about thirty children between the

2. Elizabeth H. Nicol, The Development of Validated Museum Exhibits, p. 17.

ages of eight and eleven spent two mornings a week at the Visitor Center, filming a play they had produced, building a playhouse, and engaged in other projects. Between museum sessions, the staff of Community Services visited the groups in their communities to help with related activities.

Museum Workshops. After-school workshop series for children aged six to fifteen are held in a number of exhibit areas. Each series consists of four ninety-minute sessions and costs $10. About 30 percent of those enrolled are on "scholarships." Workshop size is limited to twelve. Most participants live within walking distance of the Museum.

The programs provide cumulative experiences in areas of special interest. A recent Teahouse workshop focused on Kabuki and other Japanese theatre with participants producing a play and practing proper theatre-going behavior. A workshop in the Algonquin Wigwam dealt with pottery. After examining ancient pottery fragments, children made their own pots using Algonquin techniques. Then, in the finished vessels, they cooked sunflower soup and applesauce, which they ate with quahog shells.

Workshops for prescnool children and their mothers are held at the same time as those for older children to give mothers who have brought older children for workshops something to do with their younger ones while waiting. The programs teach arts and crafts with recycled materials.

Junior Curatorial and Museum Helper Programs. On weekdays after school and on weekends, "Museum Helpers," aged eight to twelve, and teenaged Junior Curators work at the Museum as volunteers. The "Helpers," who wear special badges, assist with live animal presentations, announce films, open doors for visitors, and carry out other duties designed to make them feel important and keep them out of mischief. Junior Curators teach informal programs and work behind the scenes helping the staff in a variety of ways.

"Open City." A recent one-year project, "Open City," involved forty-five eleven-to-fourteen-year olds in a study of the effectiveness of Boston's public transportation system in reaching educational and recreational facilities of interest to children. Two groups of children took part. One group was from a "school without walls" and worked at the study during school hours for course credit. Members of the other group, who did not receive credit, were paid a nominal sum for working for from two to three hours a week after school. Participants were from low and middle-income families. Soon to be published as a result of the project, is a "hip-pocket" transportation guide, written and illustrated by the children, which describes bus, subway, and trolley stops in relation to the points of interest. The Metropolitan Boston Transit Authority contributed free transit passes to the project.

Unscheduled Activities. On weekends, school day afternoons, and school holidays, unscheduled activities are offered in the Visitor Center. At times of peak visitation, self-manning exhibits are heavily used; and often a film is shown. During relatively uncrowded periods, staff members work with individual children and small groups of children, using sometimes Discovery Boxes (to be described) and sometimes small sets of objects from the Museum's stored collections.

Extension Programs

The Museum circulates a variety of extension materials to schools and other institutions in the greater Boston area. The materials are in the form of exhibit kits and module exhibits.

Circulating Exhibits Kits

Relating to the arts, the sciences, and the humanities, exhibit kits fall in six categories: MATCH Boxes, Mini-MATCH Boxes, Discovery Boxes, Live Animals, Loan Exhibits, and Request Loans. Each year, the kits are circulated about 4,000 times and reach nearly 135,000 students. Fees charged for the units and the lengths of time for which they may be borrowed vary. "Sponsorships" are available

for those who cannot pay the fees.

MATCH Boxes. MATCH Boxes -- MATCH stands for "Materials and Activities for Teachers and Children" -- were developed between 1964 and 1968 with the support of a grant from the U.S. Office of Education. They are self-contained multi-media kits containing three-dimensional objects and related films, photographs, recordings, games, supplies, and teacher's guides as well as projectors and other equipment.

The purpose of a MATCH Box, according to MATCH project director, Frederick Kresse, is "to establish communication between a teacher and her class on a subject that cannot be communicated very well with words."[3] The boxes deal primarily with elementary social studies topics, although there are several science units. The materials are packaged in compartmented corrugated cardboard "suitcases," which are made to order by a local firm, painted bright blue and yellow, and cost $1.50 each when bought in quantity.

There are nine copies of each of sixteen MATCH boxes, each of which is geared to two or three grade levels falling within the range of kindergarten through six. The units are loaned for two and three week periods at fees of $30, $35, and $40. Three of the boxes have been reproduced by a commercial firm for sale to teacher's colleges, curriculum centers, and school systems. Unit titles are:

A House in Ancient Greece (Grades 5-6)
Seeds (Grades 3-4)
The Algonquins (Grades 3-4)
The City (Grades 1-3)
Grouping Birds (Kindergarten-Grade 2)
Houses (Grades 2-4)
Animal Camouflage (Grades 2-3)
Netsilik Eskimos (Grades 3-4)
Musical Shapes and Sounds (Grades 3-4)
Rocks (Grades 5-6)
Japanese Family (Grades 5-6)
Medieval People (Grades 5-6)
Waterplay (Kindergarten and primary grades)
MATCH Press (Grades 5-6)
Paddle to the Sea (Grades 4-6)
Imagination Unlimited (Grades 4-6)

3 Frederick H. Kresse, Materials and Activities for Teachers and Children, Vol. I, p. 10.

A House in Ancient Greece, one of the three units being sold commercially, involves fifth and sixth grade students in the simulated excavation of a Greek villa which actually was excavated in the early 1930's as part of the ancient city of Olynthus. The objectives of the box are to introduce children to everyday life in a Greek household and to the purposes and methods of archeology.

The kit contains reproductions and photographs of household artifacts; two real artifacts (a coin and a pottery fragment); six research guides; three books (Classical Greece from the Time-Life Series on Ancient Civilizations, Archaeologists and What They Do by R.J. Braidwood and Ancient Greece by Marjorie and CHB Quennell); two filmstrips; a selection of photographs, diagrams, and site plans; a map; and excerpts from the notes of the archeologists who excavated the villa.

The Teacher's Guide outlines eleven activities to be carried out over a two-week period. The first two exercises are designed to start students thinking like archeologists. For one, an introduction to archeological processes, children "excavate" the classroom wastebasket. For the other, an introduction to "object reading," they discuss the things that contemporary U.S. coins reveal about their own culture. During subsequent sessions, the students watch a filmstrip about the excavation of the site and discuss ways in which objects become buried in the earth with the passage of time. Then they divide into six teams, each of which works independently, following a research guide, to excavate one section of the Villa. As they work, they examine artifacts and photographs of artifacts, attempting to draw conclusions about the way of life the objects represent. When they have finished excavating, they come together for a "seminar," at which each team presents its findings and performs a skit depicting an activity that would have occurred in its section. As a final exercise, after viewing a filmstrip showing the site as it looks today, the students assemble a collection of everyday objects representing a "House of Contemporary U.S.A.."

Mini-MATCH Kits. Mini-MATCH Kits containing artifacts, books and pamphlets, teacher's guides, recordings, and film strips, are loaned for two-week periods at a charge of $15. There are five copies of each of four units.

A unit on the Hopi Indian focuses on one important element of the Hopi culture, the Kachinas, presenting those spirit beings in the context of the Kachina Dance -- a serious form of worship involving the entire Hopi community. (According to Hopi belief, Kachinas act as intermediaries between the Hopi people and the "Great Ones," who control the universe. For the dance, Hopi men don spirit masks and actually become Kachinas.)

Activities in the unit grow out of a thirty-three-page illustrated "storybook" written to be read by students. Through the dance and attendant activities, the book introduces the reader to three other aspects of the Hopi culture -- food, clothing, and crafts. In addition, the volume portrays contact between the Hopi villagers and the white tourists who have come to see the dance and, by showing the two groups at lunchtime, illustrates one way in which twentieth century Western technology, with its packaged foods, has influenced Hopi tradition.

The teacher's guide accompanying the unit suggests that the book be read in several sittings and the activities carried out during breaks in the narrative. The guide provides directions for fixing Hopi hairstyles with yarn and headbands; playing two card games (variations on "Old Maid" and "Go Fish") designed to familiarize students with Kachina spirits; playing musical instruments; baking piki bread (a traditional Hopi staple); making pots and baskets; and planting corn. Most of the materials necessary for the activities are contained in the box, which is organized in layers, with artifacts on the bottom; an assortment of dolls and other gifts distributed to Hopi children by the Kachina dancers in the middle; and recordings, books, and pamphlets on the top.

Discovery Boxes. "Discovery Boxes," containing teacher's guides and objects for carrying out a single activity or for exploring a single aspect of a subject, are loaned to schools for two and three-week periods at fees of $3 and $5 respectively. An "Oriental Calligraphy Kit," one of five boxes currently available, contains ink stones and pens, cards illustrating steps involved in the making of characters, rice paper, and a sheet of oil cloth to protect work surfaces. The unit is accompanied by a teacher's guide.

Loan Exhibits. Loan exhibits containing three-dimensional objects and illustrations of various kinds are loaned for one and two week periods at charges of $3 and $5. There are 100 different units, ranging in subject matter from birds, to sea life, to ancient Egypt. Most were developed in the 1930's.

Live Animals and "Request Loans". Small live animals (mostly guinea pigs and rabbits) are loaned to schools and individual children for two and three week periods. The animals come with carrying cases, food, and directions for care. "Request loans" are assembled from the Museum's stored collections at the request of individual teachers.

Traveling Exhibits

Neighborhood Exhibit Program. In 1971-72, with the help of a grant from the Rockefeller Family Fund, the Museum fabricated module units of four Visitor Center exhibits and sent the units to locations such as hospital waiting rooms, branch libraries, church and school lobbies, and shopping centers. During the grant period, the modules were circulated eighty times.

Exhibit on Indian Stereotypes. Eight copies of a portable traveling panel exhibit dealing with ways in which Indians are stereotyped are being circulated among libraries in the Boston area. Developed by the Museum in cooperation with members of Boston's Indian community, the exhibit is composed of labels from butter and cranberry juice containers, greeting cards, toys, games, and other commercial items that contribute to popular misconceptions about Indians.

The materials are arranged in categories according to stereotype. Quotations from modern Indians refute the stereotypes by expressing the Indian point of view.

Staff

The Museum is organized into three divisions: Resource Center, Visitor Center, and Community Services. The entire staff is involved in education programs. In addition to the Director of the Museum, who assumed his job in 1962, and an Associate Director, who acts as grants and contracts officer and shares in policy decisions, there are approximately thirty-four full-time and part-time staff people in the three divisions. This senior staff is supplemented by approximately twenty full-time and part-time "work-study" students from colleges and universities in the Boston area.

Senior Staff

The Visitor Center. The staff of the Visitor Center includes a Director, a Managing Director, a Program Director, a Floor Manager, a Secretary, and six Learning Area Directors. The Director of the Center, who is responsible for policy decisions; financial management; the screening of new program ideas; the training, hiring, and firing, of senior staff; and exhibit design and development, was formerly an education director at an art museum. She has a Bachelor's degree in art history and a Master's degree in elementary education. The Learning Area Directors are part-time employees assigned to specific exhibit areas. Most have had previous teaching experience, either in the classroom or in less formal situations, and all have undergraduate degrees. Some have graduate degrees; some are graduate students; and some hold outside jobs. All have expertise in the areas to which they are assigned. In addition to developing and teaching programs, the Learning Area Directors help to train work-study students.

The Resource Center. The Resource Center, which houses permanent, circulating, and reference collections and a Recycle Museum (to be described), has about ten staff members. In charge of the Center is a Workshop Director -- a former teacher and public school curriculum developer with a Master's degree in education -- who plans, coordinates, and teaches workshops for teachers and manages workshop finances.

The Community Services Division. The Community Services Division has four full-time employees, who work with community leaders to develop programs for teachers and students. A Director of Community Services coordinates, develops, and teaches these programs and manages the Division's budget. Formerly a teacher at a storefront learning center, he has an undergraduate degree in English with graduate work in education.

College Work-Study Students

Undergraduate "work-study" students work full-time and part-time in the three divisions. Some of the students are employed under a cooperative program whereby their schools give them course credit for working in the Museum. For others, the jobs are extra-curricular. Periods of employment range from three to six months. For salaries, the students receive $2.50 an hour, 80 percent of which is paid by the federal government through their colleges, and the remainder of which is paid by the Museum. To be eligible for a work-study position, a student must demonstrate financial need. Presently, there are sixteen students working in the Visitor Center, one in Community Services, and three in the Resource Center.

In the Visitor Center, two students are assigned to each exhibit area. Under the guidance of that area's director and the Program Director, each student develops and teaches programs and does independent research. The students are also responsible for keeping up the appearance of their areas and for helping with odd jobs in other parts of the Center.

Selection and Training. Candidates for work-study positions are interviewed by the Managing Director of the Visitor Center. Approximately one out of every twenty applicants is hired.

Training entails two full days of group orientation and a varying number of days of independent study involving subject matter research and observation of programs. Throughout their periods of employment, students assigned to the Visitor Center are observed frequently by the Program Director while they are giving programs. At weekly meetings, the students share experiences and discuss problems. One morning and one afternoon a week, they work to develop programs. By the end of his or her term of employment, each student must develop at least one activity program.

Funding

The Museum's annual operating budget of approximately $50[illegible] is derived from admissions fees, fees charged for circulating materials and teacher workshops, membership dues, sales shop revenue, contributions, grants, investment returns, and contracts. Since 1969, a $50,000-a-year appropriation from Boston's Metropolitan District Commission (MDC) has provided free admission to the Visitor Center for school classes and organized groups (up to 25,000 visitors a year) coming from within a "MDC Parks Region" covering the City of Boston and neighboring areas.

Current and Recent Grants and Contracts

The Museum has been unusually successful at obtaining funds to support special programs. Current and recent grants and contracts include:

- An $11,200 one-year contract in 1972-73 to the Museum's Resource Center from Edco -- a federally-funded cooperative organization representing seven urban and suburban schools. The Center is to serve Edco as consultant and program developer.

- A one-year $30,000 matching grant, in 1972-73, from the National Endowment for the Arts (Wider Availibility of Museums Program) to support the work of the Community Services Division.

- A $500 grant, in the summer of 1972, from the Greater Boston Teachers' Center, a non-profit organization that coordinates teacher training efforts in the Boston area, to support a workshop for teachers.

- A one-year $35,000 grant, in 1971-72, from the U.S. Office of Education's Environmental Education Program to fund the "Open City" project.

- A $12,500 matching grant, in 1971-72, from the Rockefeller Family Fund to support the pilot neighborhood exhibit program.

- A two-year $51,000 grant, in 1966-68, from the U.S. Office of Education (funds made available by Title IV of the Elementary and Secondary Education Act of 1965) to support the development and evaluation of the exhibit, "Teeth".

- A four-year $480,000 grant, in 1964-67, from the U.S. Office of Education (funds made available by Title VII of the National Defense Education Act) to support the development and evaluation of MATCH Boxes.

- A $100,000 grant from the Carnegie Corporation, in 1969, to fund the expansion of the "Workshop of Things" (to be described).

Haunted House Fund-Raising

In October 1972, the Museum's auxiliary, Museum Aid, staged a "Haunted House" fund-raising in the Museum Annex. From admissions charges of 50¢ a person and the sale of refreshments, the event netted close to $30,000 in ten days. Attendance was approximately 57,000. Rooms for the House -- "Dracula's Cave," an "Upside Down Room," a "Sorcerer's Tower Workshop," and others -- were designed by department stores, specialty shops, and other firms.

Coordination With Schools

Museum Programs and the School Curriculum

Third, fourth, and fifth graders are the most frequent participants in School Group Programs, with all third-graders from Boston Public Schools taking part each year. Because the Museum wishes to remain

free to experiment with new programs and exhibit materials, Visitor Center programs are not tied to specific classroom units or grade levels.

MATCH Boxes, on the other hand, are geared to specified levels, with each unit designated for two or three grades falling within the range of kindergarten through six. When deciding on topics and grade levels for the kits, developers consulted curriculum guides used by Boston-area schools and talked with individuals in the schools to determine if tentative topics reflected current curriculum trends and occurred in at least fifty percent of curricula in use at the time. The Museum tried also to select topics that could be woven into the curricula in a number of ways.[4]

Development, Evaluation, and Final Appraisal of MATCH Boxes

Prototype MATCH Units were developed, evaluated, and finally appraised over four year's time in three overlapping "generations," each of which had a "life-span" of about twenty-one months. There were five prototypes in the first generation, seven in the second, and four in the third.

Development. The development time for each generation was approximately fifteen months. Each unit was developed individually by a team responsible also for testing and final appraisal. Each team consisted of two Museum staff members (or "co-leaders") and a number of part-time consultants -- teachers, subject matter specialists, artists, and technicians -- hired for the job by the co-leaders. The teams were guided and coordinated by a project director.

As the boxes were developed, their activities and materials were tested in area classrooms. These "tryouts," crucial to the development process, were spread over six months of each development cycle. During the tryouts, developers were able to determine the reactions of children and teachers to various lesson components. One hundred fifteen classes participated.

4. Kresse, Volume I, p. 17.

Evaluation. Upon completion, the prototypes were evaluated. Copies were placed for two and three week periods in classrooms in the Boston area, in Somerset County, Pennsylvania, and in Salinas, California. Approximately 330 teachers and 10,000 children took part.

The schools were of three types: big-city, suburban, and semi-rural. Team co-leaders made arrangements for the evaluations through school administrators. Participating teachers either volunteered or were selected by their superiors. Evaluation procedures were explained to participants ahead of time in a letter.

Teachers used the units for from eight to ten class periods, which lasted about an hour a piece.[5] At the end of each day, they recorded their reactions to the lessons on "logs." The forms used for the logs changed from first to second to third generation boxes. Third-generation forms, which the developers found to be the most useful, were open-ended, asking for comments rather than for the check marks and brief answers sought in first and second generation forms.[6]

From one to four times during most testings, a Museum observer visited the classroom unannounced. In final analyses, data provided by the observers was considered supplementary to that provided by teachers.[7] Observers of first generation lessons completed forms calling for mostly "yes" and "no" and multiple choice answers. Observers of second and third generation lessons followed a set of guidelines as they wrote down their impressions in daily note and final summary form. All three sets of observations included information about the classroom set up, the age and the maturity of the children and their attitudes towards school, the teacher's behavior and her relationship to her class, class interest in each lesson, and use of the materials.[8]

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5. Ibid, pp. 17-75.
6. Frederick H. Kresse, Materials and Activities for Teachers and Children, Vol. II, p. 91.
7. Kresse, Vol. I, p. 23.
8. Kresse, Vol. II, p. 91.

At the end of each test period, teachers completed "final appraisal forms," commenting on the effect of the units on themselves and on their classes, the overall success of the boxes, the suitability of the boxes to the curriculum, and any difficulties encountered, and making recommendations for improvements. Final appraisal forms used for first and second generation boxes applied to all units; those for third-generation boxes were custom-designed.

In several school systems, "debriefing sessions," during which teachers discussed the boxes, were held about one month after the evaluation. At some of these sessions, Museum staff members were present to record the discussion. Other sessions were tape-recorded.[9]

Data Analysis and Final Appraisals. After the boxes had been tested, the data gathered during testing was analyzed and a final report written on each box.

The data was analyzed in two ways: for "yes" and "no" and other questions requiring fixed alternative answers, answers were tabulated and percentages figured; for open-ended questions, answers were broken down, coded, and grouped into categories. Most of the analyses pertained to individual boxes. Only during analyses of second-generation data were boxes compared and generalizations about them made. Final reports were written by the co-leaders of each development team. Each report states the objectives of the box; describes the unit's materials, activities, and basic approach; outlines the findings of the evaluation period; and recommends changes.[10]

The data from the second-generation boxes included the reactions of 157 teachers. The teachers praised the units for including a rich variety of materials; for being self-contained and well-organized; for causing previously unresponsive children to "come alive;" for helping to establish a relaxed relationship between teacher and class; for inspiring students to voluntarily spend extra time with the materials and to bring related

9. Kresse, Vol. I, p. 24.
10. Kresse, Vol. II, pp. 153-309.

materials in from home; and for provoking increased learning of subject matter. Eighty-six percent said they wanted to use the boxes again. The teachers complained that the boxes were too heavy and that more time was needed to use the materials. They also suggested specific ways for improving lessons and media.[11]

Training Teachers

Through the Resource Center and the Community Services Division, the Museum offers a range of instructional services for professional and non-professional teachers.

The "Workshop of Things." The "Workshop of Things," or reference section, of the Resource Center is open free to teachers and other adults on weekday mornings and afternoons, until nine on Thursday evenings, and on Saturday afternoons. On most Thursday evenings, free films are shown.

The Workshop houses a collection of educational materials -- books, multi-media kits (including MATCH units), games, puzzles, etc. -- which are catalogued and arranged on shelves according to subject area. Teachers come to the Workshop to investigate new materials, to read books and periodicals on education and educational change, and to consult with Center staff members, who stand ready to answer questions. Many teachers visit while their classes are taking part in School Group Programs.

Workshops for Teachers. Workshops for teachers are given throughout the year by Resource Center staff members, sometimes with the aid of specialists from the community. Approximately 1,000 teachers take part annually. The workshops usually consist of between four and six sessions involving group discussion and experimentation with materials in the "Workshop of Things." Some entail field trips and independent study projects.

11. Kresse, Vol. I, p. 53.

Occasional workshops treat areas of social concern, attempting to influence the way topics are presented in the classroom. A recent program entitled "Indians Then and Now," consisted of five, two-hour sessions held over a six-week period for the purpose of destroying popular misconceptions about Indians. The program was moderated by a Center staff member and featured three speakers from the Boston Indian community. Other Indians also attended and took part in the discussions.

Special workshops for student teachers are given at the request of colleges and universities. Usually the workshops consist of one or two day-long sessions that include experimentation with Resource Center materials and observation of Visitor Center programs.

The Recycle Museum. "Recycle Museum," a corner of the Resource Center holding bins of industrial scrap materials -- sequins, rubber circles, snips of lace, and missile parts, a changing collection of odds and ends acquired from local factories and businesses -- keeps the same hours as the Workshop of Things. Teachers and others may browse through Recycle and talk with staff members about ways of using the materials in craft and other projects. Once a week, "Recycle Workshops" are held.

Schools, school systems, grade levels, individuals, and organizations can join Recycle for a fee; and members are entitled to help themselves to the materials on display. In lieu of a fee, a person can trade "home scrap" for the materials.

Community Services Workshops. The Museum's Community Services Division, established in 1971, works to apply Museum resources to the educational needs of low-income neighborhoods by helping both professional and non-professional teachers in already established neighborhood organizations such as drop-in centers, settlement houses, multi-service facilities, and free schools to develop education programs suited to the needs of their communities.

Presently the Division is working with youth workers and neighborhood children to set up a learning center in a housing project; cooperating with the program coordinator of a settlement house

to develop inexpensive learning materials for a drop-in center; helping both of those centers to train student volunteers and college work-study interns; collaborating with teachers and parents from independent schools in the black community to design and build games and crafts for use in the classroom and at home; and conducting science workshops for adults seeking high school equivalencies. A recently-awarded grant from the National Endowment for the Arts will enable the Division to expand its services.

Scheduling of School Group Programs

Visits for Boston Public School third grade classes are scheduled by the school system, which sends the Museum, in August, a calendar showing the dates and times for which the appointments have been reserved. From September 1 on, the Museum accepts other reservations, scheduling the visits around the Boston third grade calendar.

Teachers making appointments are sent notices of confirmation which include, in addition to information about admissions fees, time, date, etc., a list of exhibits and a brief explanation of what a typical program entails.

Scheduling and Distribution of Circulating Materials

Circulating materials are reserved by telephone through the Secretary of the Resource Center. By the end of the summer preceding each school year, most MATCH, mini-MATCH, and Discovery Units have been scheduled for that year.

The Secretary keeps a card for every copy of each unit in the circulating collection. When she receives a request for a unit, she records the name of the teacher and the school and the dates for which the material is reserved on the appropriate card and files the card under the month for which the loan is requested. Then she sends the teacher a confirmation slip containing the same information.

The materials usually are carried to and from Boston-area schools by school delivery truck. Most of the approximately forty-five units a month going to schools outside the Boston area are sent by United

Parcel Service, with the schools paying the postage.

Facilities

An Orientation Room in the basement of the Visitor Center has benches to seat approximately fifty and hooks along the walls for hanging coats. Here students are divided in groups before being sent to exhibit areas for school group programs.

A circular seating platform in the main exhibit area of the Visitor Center holds about fifty children for film and other sit-down programs.

In the Resource Center are three spaces used for teachers' workshops: a "demonstration room," a "seminar room," and a "do-it-yourself room." The areas are furnished with chairs, cabinets, workbenches, and audiovisual equipment.

Publications

Teachers' Guides -- the keys to MATCH, Mini-MATCH, and Discovery Boxes. Written by Museum staff members, the guides contain background information, statements of objectives, and illustrated lesson plans. MATCH Box guides include also annotated bibliographies.

The fifty-seven-page guide accompanying a MATCH Box called Paddle to the Sea -- a unit based on Holling C. Holling's classic story -- has, in addition to an introductory section explaining the box's rationale and itemizing its contents, ten "installments" or lesson plans to be used during fifteen class periods. Each installment contains information about materials to be used in the lesson, explains exactly how and in what sequence the materials are to be presented, and ends with a bibliography.

Orientation Packet -- a packet of printed materials compiled to give college work study students a clear idea of their duties and privileges. Included are a general introduction to the museum, a summary of Visitor Center activities, the job descriptions of Visitor Center staff members, an orientation schedule, a sample time sheet, a list of Museum

Things you'll need:

Record: A Conversation with Captain Inches, 33 rpm
Filmstrip: A Conversation with H. C. Inches.

You will need a record player.

* * * * * * * * * * *

At about this point, we thought it would be fun for the children to meet a real Great Lakes captain. We therefore recorded a conversation we had with Captain H. C. Inches, 85, captain on the Great Lakes for over 30 years and now Director of the Marine Museum at Vermilion, Ohio.

The record contains portions of that conversation, slightly edited and arranged. The filmstrip shows the Captain, his ships, the Museum, and some old-time ships.

The presence of Captain Inches in the classroom is a testimony to all of the people in whose lives the Lakes can be heard.

The filmstrip is best shown after the children have listened to the man.

The entire record takes 25 minutes and may well prove too long for one "listening." If so, play one side at a time. After listening, talk with the children about the Captain. What do they think about him and what he said?

Here is how the record is arranged in terms of the questions we asked.

SIDE 1 (13 minutes)

-introduction
-how he became a captain
-how long he had been a sailor

A page from the teacher's guide, Paddle to the Sea.

employees, and an outline of employee regulations.

News From the Resource Center - a two-page bulletin issued periodically by the staff of the Resource Center. Sent free to teachers on the Center's mailing list, the bulletin contains information about workshops for teachers and circulating materials.

News: the Children's Museum - a four-page newsletter, published three times a year, which features news of exhibits, programs, staff, and funding. Written and edited by the Museum's Director of Public Relations, it is sent to Museum members, contributors, libraries, and schools.

Discover All About the Children's Museum - a packet containing brief descriptions of Museum programs as well as an assortment of sample activities (a recipe for Indian corn cakes, instructions for making a "flip pad" movie, and a paper replica of a jeweler's ring-sizer). The packet is published once a year and sent to members, donors, and prospective donors.

Recycle - seventy-five pages of mimeographed instructions for making games, toys, and teaching aids from scrap materials. Hand printed and illustrated with simple drawings, "Recycle" is sold to parents and teachers for 75¢ a copy.

Final Reports - the Museum has published two final reports on projects funded by the U.S. Office of Education. Both publications can be obtained from the ERIC Document Reproduction Service, 4827 Rugby Avenue, Bethesda, Maryland 20014. They are The Development of Validated Museum Exhibits (102 pages) by Elizabeth H. Nicol, May 1969, and Materials and Activities for Teachers and Children, a Project to Develop and Evaluate Multi-Media Kits for Elementary Schools, Volumes I and II by Frederick H. Kresse, May 1968.

The Development of Validated Museum Exhibits describes the strategies and findings of a team of Museum staff members who spent two years developing and evaluating a multi-media exhibit about animal teeth. An appendix to the report contains sample

checklists used in the evaluation.

The Kresse report is in two volumes. Volume I describes in eighty-five pages the objectives, methods, and findings of the MATCH project. Volume II consists of appendices which include sample evaluation forms, portions of individual box reports, sample pages from teacher's guides, and examples of tabulated data from "second-generation" boxes.

THE BRAINTREE HISTORICAL SOCIETY

Purpose: To bring the inspiration of the past to the present generation in the hope of making a better future.

Governing Authority: Non-profit organization.

Location: Braintree, Massachusetts -- a suburb of Boston.

Community Served: The town of Braintree.

Year of Founding: 1930.

Facility: The Sylvanus Thayer Memorial Birthplace, a restored house containing period rooms, a Town Museum, and a caretaker's apartment.

Collections: American history and decorative arts.

Education Programs: An in-house program is offered by a School Program Committee.

Education Staff: Eight volunteers.

Hours: April 19 through October 12 -- Tuesday, Thursday, Friday, and Sunday, from 1:30 P.M. to 4:00 P.M.; on Saturday, from 10:30 A.M. to 4:00 P.M. October 13 to April 18 -- Tuesday and Saturday, from 1:30 P.M. to 4:00 P.M.

Admission: 50¢ for adults; 15¢ for children.

Attendance: Approximately 1500 visitors a year.

For further information, write to Mrs. Gilbert Bean, General Sylvanus Thayer Birthplace, 786 Washington Street, Braintree, Massachusetts.

THE GENERAL SYLVANUS THAYER BIRTHPLACE
THE BRAINTREE HISTORICAL SOCIETY

The General Sylvanus Thayer Birthplace, across the street from the town library in Braintree, Massachusetts, is a two-story, eighteenth-century saltbox farmhouse operated by the Braintree Historical Society. General Thayer, born in 1785, is known to area citizens as father of West Point and American technology and is generally considered his town's major historical figure.[1] The house was restored in the late 1950's.

Exhibits

A visitor entering the house by the back door finds himself in a wood-paneled kitchen, which is heated by a large fireplace and furnished with a spinning wheel, a table, and chairs. To his left off the kitchen is a small, brick-floored buttery, in which butter and cheese are made; to his right is an alcove holding a loom Beyond the kitchen are additional period rooms furnished with eighteenth-century pieces -- a living room and a "common room," on the first floor, and two bedrooms upstairs. In the basement of the house, is a "Town Museum" with exhibits devoted to the history of Braintree, military history, and "Colonial living."

Programs Given in the Museum

The Thayer House Program

Since 1961, the Braintree Historical Society, in cooperation with the Town Library and the public school system, has offered a three-and-one-half hour program to fifth graders from the town's public, private, and parochial schools.

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1. American Association for State and Local History, "The Braintree Historical Society," History News 20 (1965):59.

The program is given Monday mornings from mid-September to mid-March as a reinforcement of classroom studies in local history. The objectives are to inspire children to further study and to instill in them feelings of civic pride and responsibility. Each year approximately 1,000 students take part. Group size for each session is limited to fifty.

The students begin in the Library with a behind-the-scenes tour and a film on using a library, which together last forty-five minutes. Then, they walk to Thayer House, where half of them tour the house and the museum while the other half takes part in a kitchen workshop. After an hour and a quarter, the two groups exchange activities.

In the kitchen, workshop participants gather around the fireplace, where a costumed hostess invites them to return to the nineteenth century. They close their eyes and hold their breath; she rings a schoolbell, which she has declared to be a "time machine;" and the magic is accomplished as they exchange their coats and jackets for aprons and leather jerkins and their real names for "Silence," "Clarissa," "Benjamin," and others borrowed from the Thayer geneology. A second hostess steps forward to talk about household chores. She shows how bread was baked in a special kettle in the fireplace; explains how foods were preserved by smoking, drying, and salting and how herbs were used; and describes the steps of flax processing, which a third woman demonstrates on flax break, swingling block, and heckle. Following this orientation, the students divide into groups to take turns at various chores under the guidance of hostesses. By the end of an hour, each child has churned and molded butter, dipped a bayberry candle, learned about the spinning wheel, and worked the loom. After sampling slices of the bread that has been baking in the fireplace, the children change from their aprons and jerkins to their jackets and coats and set out to tour the house.

In the living room, they listen to a brief talk on the history of the house and the life of Sylvanus Thayer. Then they visit other period rooms and the Town Museum, spending half an hour in each of the two areas. In the period rooms, their hostess describes sleeping conditions, leisure time activities, and other aspects of everyday life, encouraging questions and discussion and taking time to let the youngsters handle a horn cup, a leather pitcher, and a number of other artifacts. In the Museum, she discusses each case briefly, emphasizing particularly a Victorian dollhouse and displays of schoolroom artifacts, old firefighting equipment, and Thayer memorabilia. Then she distributes mimeographed sheets containing crossword puzzles and other question-and-answer games. The children have about eight minutes to play the games before returning to school.

Methods. Children come to the program well-prepared, having seen before their visit a classroom slide lecture on the history of Braintree. Developed by the Historical Society, the lecture has a script for the teacher to read and uses slides of old photographs, drawings, and paintings as well as slides of modern scenes, to compare the Braintree of the past with the town of today. The lecture is about an hour long and often is given in two parts. Each child receives a map on which he marks the locations of historic sites as the landmarks are discussed.

The museum program is presented as a kind of game for which participants are asked to use their imaginations, find the answers to questions and problems ("Where do you think they got salt in those days?" "What modern instrument does this clavichord sound like?" "Why did they use so many herbs?"), and carry out adventuresome activities. Most students become thoroughly caught up in the experience. The theme of the program is "constructive living through hard work." Old-fashioned New England virtues are emphasized in order to inspire children to become effective and diligent citizens.

The night before each session, hostesses mix the bread dough and set it to rise; and the morning before, they melt the wax for the candles. After some experimenting, they have found a bread recipe that succeeds consistently despite the unpredictability of the fireplace oven.[2]

Extension Services

The Society has no extension programs, preferring because of a limited budget, to channel its energies in one direction.

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2. The recipe is adapted from Ruth Wakefield's Tried and True Toll House Cookbook, New York, 1965.

Shredded Wheat Bread

Pour 2 cups of boiling water over 2 crumbled shredded wheat biscuits, 1 teaspoon of salt, 1/3 cup of sugar, 1/3 cup of molasses, and 3 tablespoons of shortening.

Let cool to lukewarm and add 1 cake of yeast dissolved in 1/2 cup of lukewarm water. Mix thoroughly and add 5 or 6 cups of flour. Let rise overnight. Punch down. Knead, adding more flour if necessary. Shape into three round loaves. Bake 40-45 minutes.

Staff

The program is run by a School Program Committee of eight volunteer hostesses, organized in 1961 by its present chairman, a former Girl Scout leader with an interest in history. Committee members were selected on the basis of their ability to work with children and their aptitude for craft activities. Each woman developed the program segment she now teaches.

Funding

The Society's annual operating budget is approximately $1,600. About $300 a year is spent on the Thayer House Program, which is supported entirely by selling, to school groups and other visitors, postcards, small bags of potpourri, and candles made in workshop sessions. In 1961, penny, nickel, and dime contributions from school children provided the seed money for the program.

The Society has grown rapidly over the past fifteen years; and members attribute the growth largely to the Thayer House Program, which has attracted widespread community recognition and support.

Coordination with Schools

Program Development

In 1961, in response to a request from the Braintree Public Schools for help in teaching local history, the Society formed the School Program Committee, described above, which developed the Thayer House program over a twelve-month period.

First the Committee consulted with teachers and the Elementary Curriculum Supervisor from the School System to determine what kind of program would be useful. Then members went to Old Harlow House and Old Sturbridge Village, two nearby outdoor museums with well-established programs, to observe activities and obtain

advice about craft techniques and sources of supplies.

Throughout the period of development, the Committee consulted regularly with the schools. As craft activities were worked out, they were tested outside the classroom with small groups of children. When the program was nearly finished, it was tested in a fifth-grade classroom. During its first year (1961-62), it was given on a trial basis to all fifth grade classes. At the end of the school year, the Society met with participating teachers to obtain their comments and suggestions. As a result of the meeting, a few changes in the way the material was presented were made the following year.

Informing Teachers

In the fall of 1962, the Society demonstrated the program to a gathering of fifth grade teachers from public, private and parochial schools. In subsequent years, demonstrations have been given to new teachers prior to their classes' visits.

At the beginning of the school year, public elementary school principals receive from the System's Curriculum Supervisor, information sheets about the program, which they share with fifth grade teachers. The sheets contain procedural instructions for teachers and a calendar showing dates for which classes have been scheduled. The teachers also receive teacher's guides.

Facilities

Supplies are stored in kitchen cupboards, on shelves in the buttery, and in desks, tables, and cabinets throughout the house.

Publications

Teacher's Guide -- an illustrated glossary of thirty-six terms that are used during the Thayer House program. The guide was developed by the Historical Society and is reproduced and distributed by the Braintree Public School System.

THE NEW YORK STATE HISTORICAL ASSOCIATION

Purpose:	"To instruct and to preserve for public use and enjoyment the nation's heritage of sites, buildings, and objects significant in its history and culture."[1]
Governing Authority:	Private
Location:	Cooperstown, New York
Community Served:	The State of New York
Facilities:	A library building, a graduate school building and three museums -- Fenimore House, which houses exhibits and offices; a Carriage and Harness Museum; and a Farmer's Museum and Village Crossroads comprising a Main Barn and twelve period buildings.
Year of Founding:	1899
Collections:	New York State cultural history, fine arts, and decorative arts.
Education Programs:	In-house and extension programs for children and adults. Adult programs include a graduate study program for museum professionals and summer seminars on American culture in addition to the programs described in this chapter. Programs described here are offered through a Department of Education.
Education Staff:	Eight full-time and two part-time regular staff members; approximately thirty-five part-time paid guides.

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[1] Frederick L. Rath, Jr., ed., The New York State Historical Association and its Museums, p.9.

Hours:	Daily from 9:00 A.M. to 6:00 P.M.. Closed on Christmas, Thanksgiving, and New Year's Day. In July and August, Fenimore House is open until 9:00 P.M..
Admission:	To the Farmer's Museum: $1.75 adult, 40¢ junior, and 50¢ educational; to Fenimore House: $1.25 adult, 40¢ junior, and 50¢ educational, with reduced "two-way" and "three-way" rates for children and adults.
Attendance:	Approximately 200,000 visitors a year.

For further information, write to Mr. Milo Stuart, Chief of Education, New York State Historical Association, Cooperstown, New York, 13326.

THE NEW YORK STATE HISTORICAL ASSOCIATION

The New York State Historical Association, a private institution founded in 1899, operates three museums in Cooperstown, a lakeside village in the northern foothills of the Catskill Mountains. Believing that "the safest road to a steadfast patriotism lies in an intelligent and sympathetic understanding of America's past,"[2] the Association offers a variety of education programs for children and adults. All in-house programs for children take place in two museums -- the Farmers' Museum and Village Crossroads and Fenimore House, an art museum.

Exhibits

Farmers' Museum and Village Crossroads

The Farmers' Museum and Village Crossroads portray life as it was lived in rural New York State during the "Age of Homespun," the seventy-five years between the American Revolution and the outbreak of the Civil War. The complex is located about half a mile north of Cooperstown.

The Farmers' Museum, where the visitor begins his tour, is housed on the two floors of a large "Main Barn," which was once a dairy barn. On the first floor, are a Pioneer Section containing the simple household utensils and woodworking and farming tools brought to the New York wilderness by the State's earliest settlers; a collection of period fire engines, "pleasure wagons," chaises, sleighs, and other vehicles; an exhibit of decorated tinware; and a Craft Hall depicting the skills of carpentry, felt hat making, fishing, hunting, and trapping. Upstairs are two exhibit areas: "The Woman's World," which illustrates early household chores, and "The Farmer's Year," a series of displays giving a month-by-month account of farm life in the early 1800's. During the summer,

2. Ibid, p. 9.

the late spring, and the early fall, craft interpreters are at work in the Barn demonstrating a number of crafts and technologies.

The Village Crossroads, to the south of the Main Barn, is an outdoor folk museum of twelve early nineteenth-century buildings, brought to the site from the towns and farms of the surrounding countryside and then restored. Typical of their period and locale, the buildings include a country store; a church; a blacksmith shop; a printing office; a schoolhouse; a lawyer's office; a doctor's office; a druggist's shop; a tavern; and the Lippitt Farm, a homestead composed of a barn and outbuildings, a field, and a six-room "salt-box" house. The Farm, like a number of other exhibits at the Village Crossroads, is in operation. Every day its animals are cared for; and during the growing season, its field is cultivated with period implements drawn by horses or oxen. Inside the house, women employed by the Association tend the kitchen fireplace daily; make butter and cheese; and using old recipes and equipment, bake breads and cookies for guests to sample.

Fenimore House, built in 1932, stands across the road from the Farmers' Museum on the site of a cottage where novelist James Fenimore Cooper lived for a number of years. The house contains both the offices of the Association and an art museum, whose chief focus is eighteenth, nineteenth, and early twentieth century folk art. The folk art collection includes over a thousand examples -- portraits, scenes, and sculptures by well-known and little-known artists as well as a range of decorative art pieces. In addition, the house displays a fine art collection of landscapes, portraits, and genre paintings depicting scenes and people of eighteenth and nineteenth century New York State. One gallery is devoted to James Fenimore Cooper and contains a few of his personal belongings and manuscripts as well as paintings inspired by his novels. Fenimore House reflects and reinforces the theme of the Farmers' Museum -- that of everyday life in upstate New York.

Programs Given in the Museum

Winter Workshops

Tuesday through Friday, from November until mid-April, three-to-four-hour "Winter Workshop" programs are offered to fifth-through-twelfth-grade classes. In 1972, 1681 students took part. Seventh-graders studying a classroom unit on the "Age of Homespun" were the most frequent participants.

The purpose of the workshops is to enable students to experience life during the "Age of Homespun." Teaching techniques are inductive. Through planned questioning, guides lead the youngsters to define the meanings of the terms, "role," "custom," "process," "craft," and "patterns of time and space," and to understand the purposes and functions of a museum.

When a teacher makes a workshop reservation, she selects three activities from among the following: "Home Kitchen Activities," "School Life," "Flax Processing, Spinning, and Weaving," "Printing," "Blacksmithing," "Folk Sculpture," "Reading a Painting," and "James Fenimore Cooper." At the Museum, her class is divided in thirds; and each group works separately at one activity.

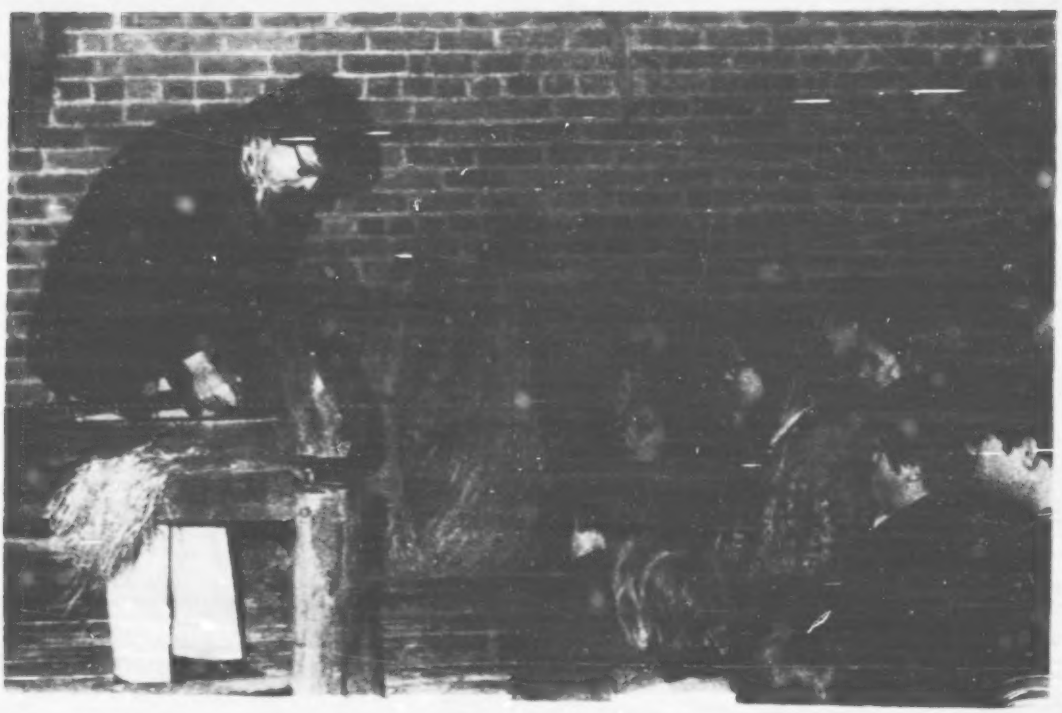
First, in a thirty-minute "object reading" exercise, students analyze fifteen everyday objects from the "Age of Homespun." The items include kitchen and other household artifacts as well as tools used in the practice of various crafts and technologies and range from a butter press, to an ivory rolling pin, to a blacksmith's measuring wheel. The youngsters examine each artifact, initially with their eyes closed by touching, smelling, and listening, and subsequently by looking without touching. Then, in groups of six or seven, they discuss what they have learned and formulate hypotheses. Finally, they come together to draw conclusions.

The activities that follow this introductory exercise last about an hour. For "Flax Processing, Spinning, and Weaving," the basic group of ten students is split in half; and each smaller group works under the direction of a guide. One section uses spinning wheel and loom while the other works with flaxbreak, swingling knives, hetcheling combs, and wimble to process flax and make lengths of rope. The guides introduce each technique with a brief demonstration, then assume a more passive role, answering questions, making suggestions, and helping to untangle mistakes. At the end of half an hour, the two groups switch guides and activities. During a brief discussion following the activities, one of the guides uses the terms, "role," "custom," "process," "craft," "occupation," and "patterns of time and space," and comments on how learning about the past through a museum is different from learning about the past through books, films, and other media. Then the group visits several Crossroads buildings in addition to the one in which the activity session took place so that students can relate their experience to life in the village as a whole.

Finally, the entire class gathers in a classroom for a discussion in which concepts introduced earlier in the morning are reinforced, students share their experiences, and the guides are able to determine to some extent how much the youngsters have learned. One of the women shows slides of museum scenes and paintings that illustrate terms used earlier. As she does so, she asks for answers to two questions first posed at the end of the workshop session: "What does a museum tell you?" and "What does a museum do?" As the students reply, she uses flash cards to reinforce their answers.

Methods. A primary objective of the program is to develop in participants the skills necessary for "reading" the Museum's non-verbal materials, which are defined in a Workshop teacher's guide:

Winter workshops. Top: "Blacksmithing."
Bottom: "Flax, Spinning, and Weaving."



> Non-verbal materials are differentiated from verbal sources in that one must develop a method of reading them using the five senses, research, and analytical questioning and reasoning. Just as one learns to read a book, also one must learn to read non-verbal materials to gain information. Non-verbal materials most commonly are put into the categories of object (artifacts), visuals, and sounds.3

The guide goes on to explain that once a student has mastered this special kind of "reading," he will be able to work with original source materials and to employ methods used by professional historians and archeologists.

Throughout Winter Workshop sessions, students are encouraged to use their five senses and to ask analytical questions. During their tour of the Lippit Farm, their attention is called to the smell of the barn, the "buckwheat" call of the guinea hen, and the cold of the farmhouse storeroom. They are urged to notice such small details as a hawk trap atop a pole next to the smoke-house and to taste the slices of dried apple and the pieces of gingerbread set out in the farmhouse kitchen. At the same time, their guide asks questions designed to stimulate further questioning on their part and to make them more aware of their surroundings. In the guestroom of the Lippit farmhouse, she asks, "Why is the bed so high?" "What is the floor made of?", "How is this house different from yours?" and at the end of the Flax, Spinning, and Weaving Workshop "What attitude do you think a family would have about a piece of clothing made in this way?"

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3. New York State Historical Association, "Non-Verbal Materials," p. 1.

Special Workshops

Occasionally special workshops lasting a day or longer are given at the request of individual teachers. In April 1972, a workshop for thirty ninth-through-twelfth-graders from Long Island entailed two full days of activity. The students began on a Thursday morning with a tour of the Main Barn and the Farmers' Museum. After the tour came a two-and-a-half-hour session in object reading, followed by lunch, a series of hour-long workshops, a tour of the Crossroads, and a general discussion. That evening, at the Crossroads Tavern, there was dinner and an entertainment consisting of nineteenth-century music and drama and a slide exhibition produced by the students in one of the afternoon workshops. Friday's schedule included a tour of Fenimore House, additional workshops, and free time for sightseeing.

Guided Tours

On weekday mornings and afternoons during May, June, September, and October, Museum guides give tours of Fenimore House, of the Farmers' Museum, or of both, to classes of all grade levels. In 1971, 15,836 students took part. More than 2/3 of the tours were of the Farmers' Museum.

A tour of the Farmers' Museum typically entails an hour at the Main Barn and two hours at the Village Crossroads. Exhibit areas stressed in the Barn are the Pioneer Section, where the guide takes artifacts from the exhibits and passes them around for students to examine and identify; the "Woman's World," where there is a spinning and weaving demonstration; the "Farmer's Year," and the vehicle display. In the Crossroads, all buildings usually are visited. Favorite exhibits are the Blacksmith Shop, where the children can watch a smith at work; the Print Shop, with its press in operation; the farmhouse kitchen; and the General Store.

A tour of Fenimore House generally lasts an hour and involves visits to a number of galleries. The guide points out the differences between fine art and folk art and describes the place of folk art in everyday life during the Age of Homespun. Since most participating groups have been to the Farmers' Museum first, guides usually relate exhibits in the House to those at the farm.

Extension Services

The Yorker Program

NYSHA's Yorker (junior membership) program, established in 1942, is the second oldest continuous statewide junior history club in the United States. Open to middle and senior high school students, who participate through chapters in their local communities, the program reaches cities, towns, and rural areas throughout New York State. Traditionally, the purpose of the program was to stimulate an interest in the history of community, state, and nation. In recent years, in order to reflect the concerns of modern teenagers, increasing stress has been placed on present-day social and environmental problems.

Yorker chapters, led by volunteer adult sponsors, are organized into twelve geographic districts. Each district elects annually a slate of officers from among its members. Together the twelve officers form a Statewide Advisory Council which meets in Cooperstown several times a year to confer with Association staff about policies and programs.

Chapters usually are formed in schools, and sponsors generally are schoolteachers. About 75 percent of all Yorkers are of junior high school age. Activities carried out through the chapters include the establishment and operation of regional history museums; research and writing; the taping of interviews with senior citizens; the design and building of displays and exhibits; and the development of movie and slide collections.

As a junior member of NYSHA, a Yorker pays $1.50 annually in dues. His benefits include a year's subscription to The Yorker magazine (to be described), free admission to Association museums, free participation in the Winter Workshop Program, and eligibility to compete for individual and club awards and to attend a statewide Yorker annual meeting.

Each year in May, over 2000 Yorkers from throughout the State come together for the annual meeting. The purpose of the gathering, which lasts for a long weekend, is to give the student the chance to visit sites of historic interest in areas of the State apart from where he lives and to meet other young people who share his interest in social studies. The location of the meeting changes each year, but its program always includes tours of the area in which it is held, lectures by regional experts, a dance, and an awards session. Average base cost per student is thirty-six dollars for three days' lodging, meals, and miscellaneous expenses. Most chapters pay for transportation through special fund-raising activities.

Yearly awards for chapters and individuals are an important part of the Annual Meeting and of the Yorker program as a whole. Chapter awards include Chapter Achievement and membership trophies; first, second, and third prizes and a number of specials for clubs who have designed and built outstanding history exhibits; and an Architectural Survey Project Award for the club submitting the most complete building survey forms for buildings in its community. The purpose of the exhibit competition is to help students understand a concentrated area of state or local history and to effectively communicate that understanding to others; that of the Architectural Survey competition is to foster an appreciation of local architecture and to help build for NYSHA and the New York State Board for History Preservation an inventory of architecturally-worthy buildings in New York State.

Since 1966, membership in the Yorker Program has dropped from 10,000 to 5,500. The decline is due in part to decreased school budgets and in part to a lessening of teenage interest in history. In order to reverse the trend and to make the program relevant to a wider range of young people, the Association has begun to work with community leaders in the inner-city to establish new chapters there. Efforts so far have been encouraging. Between November 1971 and April 1973, seven new chapters were started in New York.

Inner-city Yorkers work mostly in their immediate neighborhoods doing service work and tracing the origins of the ethnic groups that have settled there. The oldest chapter in New York City, East Harlem's Muscoot Yorkers, was established in 1966. The chapter has a membership of thirty-five black and Puerto Rican students, whose chief concern is discovering the roots of their heritage. The Muscoots have helped to develop an exchange program in which Yorkers from city chapters visit upstate members and vice-versa; hosted a statewide advisory council meeting; and been responsible for numerous assembly programs, field trips, tours and fund-raisings in their neighborhood. Until recently Muscoot membership was limited to sixth, seventh, and eighth graders, but now there are two Muscoot Chapters -- the original one for junior high school students, sponsored by a teacher, and a new one for older teenagers. The new chapter is sponsored by the Museum of the City of New York.

Upstate clubs are quite different from their inner-city counterparts. The French Creek Chapter in the town of Sherman is a star among upstate chapters. Founded in 1946 and sponsored ever since by the same woman, the Chapter has established an outdoor museum of five restored and furnished buildings on the town's common green. The museum is run entirely by Yorkers, who maintain the buildings and collections, design and construct exhibits, and guide visitors.

Regional Exhibition Workshops

Regional Exhibition Workshops, conducted by teachers and other participants in the Association's Summer Social Studies Seminars (to be described) are held each year in communities throughout the State. The purpose of the programs, as stated in a 1971-72 brochure, is to "design, research, and produce exhibitions and shows out of regional concerns and resources" in order to fill what the Association terms a "considerable and critical need" for making individuals more aware of their environment and for helping them to develop the skills necessary to communicate that awareness to others. In 1971-72 there were seventeen workshops. Those for elementary and high school students included two for second graders from Manlius, New York, in which teachers and parents taught students to use cameras and tape recorders to develop their own audiovisual materials describing "Farms Long Ago and Farms Today" and "Schools Long Ago and Schools Today"; one for seventh and second graders from New York City in which the older students taught audiovisual techniques to the younger and together the children developed a multi-media presentation called "Ecological Niches"; and one in which twenty inner-city and suburban teenagers worked together to study and document the architecture, ethnic make-up, and history of "South End Albany," producing finally a festival for neighborhood residents.

Publications and Audiovisual Aids

The development of publications and audiovisual aids for classroom use is an important part of the education program. Materials produced by the Association, as well as other materials pertaining to New York State history, are sold to schools through the Association's Fenimore Bookstore, which provides the Department of Education with a nonprofit revolving fund for production and distribution. Many of the materials have resulted from the Summer Social Studies Workshops (to be described), and have been designed and piloted by teachers. Titles include:

19th-Century Architecture in New York State -- a set of twenty-five slides which acquaint the student with styles of 19th-century architecture. Costing $6, the set is accompanied by a four-page "visual primer" containing a capsule description, a photograph, and a line drawing of each style. The primer may be bought separately for 25¢.

Crossroads of Yesterday -- a fourteen-minute color filmstrip depicting village life in the early 1800's. Made at the Farmers' Museum and Village Crossroads, the filmstrip is supplemented by a teacher's guide and a recorded narration. The cost of the unit is $9.

Patterns of Homespun -- four twenty-minute color filmstrips, each of which depicts an aspect of life in the "Age of Homespun." Sold in sets of two for $20 a set, the films relate to classroom studies at the seventh grade level. Each set is accompanied by a recording containing a narration, sound effects, and folk music.

The Crime and Punishment of Stephen Arnold -- a kit comprising a twenty-five-page booklet and a twenty-one-page packet of facsimiled source materials describing the events surrounding a murder that occurred near Cooperstown in 1805. Designed to provide insights into the social institutions of the times, the unit is used by junior and senior high school teachers in connection with a number of classroom subjects. Copies of newspaper articles and of court records of trial proceedings are included among the source materials. (The copies were obtained inexpensively by photographing the originals and making copies of the resulting high-contrast prints.) The cost of the unit is $1.

Flax Kit -- a $10 unit containing samples of flax at each stage of processing. The unit is accompanied by a "History Note," "The Story of Flax."

Iroquois Craft Sampler -- a set of eighty color slides documenting Iroquois craft processes as practiced today. Accompanied by a nine-page

annotation, the set sells for $20 and may be supplemented with artifacts and recordings of Iroquois songs.

Sounds of the Iroquois -- a $3 recording of sounds commonly associated with the pre-Columbian Iroquois. The recording is accompanied by a teacher's guide.

Sounds of the Age of Homespun -- a recording of everyday sounds (spinning wheel, loom, butter churn, etc.) from the Farmers' Museum and Village Crossroads. Together with a teacher's guide, the recording sells for $3.

Exhibit Portfolios -- seven portfolios, each containing fifty black and white photographs suitable for classroom display. Titles include "Erie Canal," "Farm Life Today," "Growing Up Black," "The Lower East Side," "Main Street," "Neighbors on the Block," and "Open Space in the Inner City." The cost of each portfolio is $5.

Migration to the City: 1890-1940 -- a set of 318 black and white slides of period photographs illustrating both European migration to the United States and black and white in-migration at the turn of the century. The kit, which sells for $100, was developed to augment a seventh-grade social studies unit but can be used with other grade levels as well. Individual slides are available for 35¢ apiece.

Specially-Funded Short Term Projects

Two short-term projects, both funded by the New York State Council on the Arts, were carried out recently in cooperation with other institutions.

The first project, "Craftsmen in the Schools," sent twelve Iroquois craftsmen to seventy-two schools, local historical societies and museums in New York State to demonstrate and teach traditional crafts.

The second project, the development of multimedia "Migration to the Cities" kits, was actually carried out by the Oneida Historical Society in Utica, New York. Working with its own money and with New York State Council on the Arts money provided by NYSHA, the Society produced two kits -- one on Utica's large Italian population and the other on the city's Welsh population. Both kits contain slides, recordings, and artifacts. The Italian kit includes also a video-tape of an Italian grandmother making a traditional cheese cake. Artifacts in the Italian kit are still in use in Utica's first and second generation Italian households. There are religious objects such as novena beads and a holy water font; specialized kitchen utensils used in the making of sausages and pasta; and a bocce game, a favorite pastime. The two women who developed the kits were trained in audiovisual techniques at a recent NYSHA summer social studies workshop.

Staff

A Department of Education is responsible for the programs described. Staff positions include a Director of Education, an Associate in Education, two Assistants in Education, two Education Aids, one Photographer, one Regional Program Coordinator, and two Guide Supervisors. This regular staff is supplemented by approximately thirty part-time paid guides.

Regular Staff

The Chief of Education, who is also an Assistant Director of the Association, supervises the Department of Education, conducts workshops for teachers and students, and develops extension materials. A former high school teacher, he has a Bachelor's degree in psychology with graduate work in museum studies, American folk life, and the social sciences.

The Associate in Education is directly responsible for the Yorker, the school tour, and

the Winter Workshop programs and for the training of guides. A former classroom teacher, he has a Bachelor's and a Master's degree in education.

Much of the responsibility for school tours and Winter Workshops falls to the two Education Aides. One of the women, who was formerly with an art museum and has a Bachelor's degree, plans and teaches Winter Workshops and helps to train guides. The other woman schedules tours and is secretary to the Associate in Education.

Guides

Backgrounds and duties. Guides are area housewives, many of whom are college-educated and a number of whom are former teachers. Some of the women specialize in the Farmers' Museum; the remainder, in Fenimore House. The former work on call; the latter, who serve as building interpreters as well as guides, work regularly scheduled hours. Approximately fifteen of the women give Winter Workshops in addition to tours.

Training. Training for Farmers' Museum guides consists of approximately ten three-hour sessions given over a two-week period in the spring. The sessions are conducted by the Department of Education and other Association staff members. The first two sessions are for new guides. Through tours and discussions, the women are introduced to the exhibits, to current educational practices, and to the content of the New York State social studies curriculum. For continued reference, they receive lists of social studies topics covered in New York State classrooms. Subsequent sessions, for new and experienced guides, are concerned with techniques of presentation (usually an entire day is devoted to object reading exercises), special topics, and specific exhibit areas. On the final day of training, experienced guides give demonstration tours. As preparation for the training period, publications dealing with Museum exhibits, local history, and educational theory are read. After the period, tours given by experienced guides are observed and

monthly meetings attended. New guides study at home with a training kit containing printed materials, several of the recordings and filmstrips described previously, and tape recordings of training lectures.

There is no yearly training program for guides at Fenimore House because the turnover there is low. Instead, there are one-to-two-week "apprentice periods," during which initiates observe experienced guides at work, and monthly meetings, where techniques are demonstrated and problems discussed. In addition, the women work at home with training kits similar to those used by Farmers' Museum Guides.

Winter Workshop guides receive special training at a series of meetings in early November and at occasional meetings during the Workshop season. In November, the women learn techniques of flax preparation, spinning, weaving, and nineteenth-century cooking, and practice teaching methods. At the subsequent meetings, teaching methods are demonstrated and video-tapes of experienced guides giving programs shown.

Training for all guides includes an annual field trip. During a recent trip to Old Sturbridge Village, Massachusetts, the women took general and behind-the-scenes tours and met and talked with Sturbridge guides.

Funding

The Association's total annual operating budget is $485,000. Exclusive of salaries, telephone, travel, postage, and office expenses, about $114,000 is spent each year on education programs. This amount is broken down approximately as follows:

1.	"Junior" programs (the Yorkers)	$12,000
2.	Yorker annual meeting	4,500
3.	Yorker scholarships	4,000
4.	Farmers' Museum School Program	7,500
5.	Audiovisual/photographic supplies	2,000
	subtotal	$30,000
6.	Fenimore House guides' salaries	$24,000*
7.	Special grants projects	$57,000**
8.	Educational materials development	$ 3,000***

Coordination with Schools

Museum Programs and the School Curriculum

The Winter Workshop program and the tour program both relate to social studies units taught at a number of grade levels in New York State schools. The tours are given to students of all grade levels; but the workshops, developed especially for seventh-graders, are given exclusively to fourth-graders and above. The most frequent participants in the programs are seventh, fourth, fifth, and eighth graders, in that order.

Seventh-graders study two units relating to tour and workshop content -- "New York in the Emerging Nation" and "New York in the Age of Homespun." Pertinent classroom subjects covered by other grades include "Everyday life

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*An estimate -- salaries of Fenimore House guides are not itemized separately but are included in general salary expenses.

**Workshops supported by grants from the New York State Council on the Arts.

***Varies from year to year depending on need and availability of funds from revolving account for materials development. Figure cited is an average.

in early America" (fourth grade); "social and economic organization in the United States" (fifth grade); and "the United States in the nineteenth century" (eighth grade).

Teachers are urged to conduct preparatory and post-visit exercises in the classroom. Well in advance of her museum visit, the teacher whose class is scheduled for a Workshop is sent a set of "History Notes" and a five-page lesson plan on the techniques of conducting object reading exercises. At the end of the museum experience she is given a set of post-visit materials that include suggested questions and activities for students and a one-page questionnaire. The questionnaire, which is to be filled out by her, asks for opinions regarding each of the program's components and for indication as to whether the post-visit guide was used. If she has used the guide, she is asked to indicate which of the suggested activities she has found successful. The teacher whose class is scheduled for a tour may request a selection of free pre-visit leaflets about Museum exhibits. No post-tour materials are available.

Training Teachers

Summer Workshops. Since 1965, grant-sponsored summer workshops for social studies teachers have been held. The workshops were started at the request of the New York State Department of Education. During their first three years they were aimed at training seventh-grade teachers to teach the newly-revised State social studies curriculum. Beginning in 1968, the scope of the workshops broadened as local historians and museum personnel and social studies teachers of all grade levels were invited to participate; and the focus of the programs changed as increasing emphasis was placed on the reading of non-verbal materials and the development of skills in the use of tape recorder and camera.

The 1971 workshop, which ran through most of July, was entitled "Object, Sound: A Documentary

Study of Place." Potential participants were informed of the program through fliers mailed the preceding spring. About sixty recipients applied; of those, thirty were accepted, and twenty-three took part. Four diverse communities in the Cooperstown area were studied and mixed-media presentations (exhibits and taped slide shows) built from the research. As a result of the program, Regional Exhibition Workshops, several of which are described on page 52 , were held throughout the State.

Training for Yorker Sponsors. Recognizing that the success of the Yorker program is determined largely by club sponsors, the Association holds an annual Sponsor's Workshop devoted to curriculum, museum methods, and club problems and programming. A handbook and several other publications also help to guide the sponsors.

Informing Teachers

Each fall, approximately 2500 letters announcing the Yorker Program and the Winter Workshop Program are sent to public, private, and parochial schools throughout New York State. The letters are addressed to individual teachers and to the attention of school social studies chairmen. Little effort is made to publicize the tour program.

Scheduling Tours and Workshops

Reservations for guided tours and Winter Workshops are made by mail or telephone. The Education Aide responsible for scheduling keeps a notebook of daily appointment sheets for tours and a weekly calendar for Workshops. She works closely with the Guide Coordinator, to whom she sends a schedule each week, outlining activities for the week to come.

Spring is a particularly busy season at the Farmers' Museum, where school visitation is limited to 300 students a day. The demand for spring tours far exceeds the number given; and many spring reservations are made a year in advance.

Facilities

A remodeled carriage shed at the Village Crossroads provides classroom and workshop space for school groups. The building accommodates up to fifty children and contains audiovisual materials, folding chairs, a loom, a spinning wheel, and other equipment.

A small guide office serves as a meeting place for guides and as the office of the Farmers' Museum Guide Coordinator.

Publications

Educational Services and Materials -- a forty-three-page catalog describing services offered by the Association and listing over 2,000 books, slides, recordings, filmstrips, and other materials available from the Fenimore Bookstore. The catalog is sent free to teachers who request it.

Handbook for Yorker Sponsors -- a sixty-two-page compilation of mimeographed leaflets that provide the Yorker sponsor with practical advice on setting up and running a chapter and with suggestions for projects and activities.

The Yorker -- a magazine sent four times a year to Yorker members and sponsors. Edited by the Associate in Education, it includes feature articles about individual chapters, items written by members about special projects, and a column, "The Cracker Barrel," containing chapter news and project suggestions.

Yorker Notes -- a monthly newsletter sent to Yorker officers and sponsors. From three to four pages in length, the publication describes the activities of the various chapters and offers instruction on participation in state activities.

History Notes -- a set of twenty-one mineographed leaflets, each of which is devoted to one aspect of life in the Age of Homespun. Sold for $2,

the set includes information about crafts and technologies and descriptions of the Village Crossroad and the Farmers' Museum.

Manual for Yorker Officers -- an eleven-page mimeographed publication on the administration of a Yorker Club. The manual includes sections on the responsibilities of a club sponsor, the duties of officers, and parliamentary procedures, as well as hints for club officers and members.

Yorker District Handbooks -- seven mimeographed handbooks on the organizational structure and activities of the Adirondack, Capital City, Catskill, Genesee, Lake Ontario, Long Island, and Sullivan-Clinton Yorker Districts.

Photography Handbook -- a forty-eight page workbook containing tips on methods of photography. Developed for use in summer workshops, regional centers, and the graduate study program, the booklet is not generally available or for sale.

MUSE

The Bedford Lincoln Neighborhood Museum

Purpose: To heighten the child's awareness of his natural and cultural environments and to expand his world beyond the confines of the city; to provide enriching experiences for children of diverse cultural backgrounds.

Governing Authority: Private, with municipal financial support.

Location: Brooklyn New York's Crown Heights section.

Community Served: The New York metropolitan area.

Year of Founding: 1968. MUSE is an interim facility of the Brooklyn Children's Museum, which was founded in 1899.

Facility: A remodeled automobile showroom -- a temporary facility housing exhibits, workshops, and offices.

Collections: Anthropology, the natural sciences, American history, and world history.

Education Programs: In-house and extension programs for children and adults.

Education Staff: Thirty-five full-time and approximately twenty-eight part-time staff members. Sometimes college students supplement the regular staff.

Hours: Summer: from 10:00 a.m. to 5:00 p.m., Monday through Saturday. October through May: from 10:00 a.m. to 5:00 p.m., Tuesday through Saturday, from 1:00 p.m. to 5:00 p.m. on Sunday.

Admission: Free.

Attendance: Approximately 100,000 visitors a year.

For further information, write to Mr. Michael Cohn, Curator-Instructor of Cultural History or Ms. Nancy Paine, Curator of Collections, MUSE, 1530 Bedford Avenue, Brooklyn, New York 11216.

MUSE

MUSE, the Bedford Linclon Neighborhood Museum, occupies a remodeled automobile showroom in Brooklyn New York's Crown Heights section. MUSE is an offspring of the Brooklyn Children's Museum -- the world's first children's museum -- which was founded in 1899 and housed until 1967 in two old mansions in nearby Brower Park. In 1967 the mansions were torn down to make way for a new museum facility, and in 1968, MUSE opened to serve both as a neighborhood museum and as the temporary home of the parent institution.

From its beginning, the Brooklyn Children's Museum -- and now MUSE -- has been a "see-and-touch" museum, where objects can be handled, worn, used, and borrowed. Its purpose has been to heighten the child's awareness of his natural and cultural environments and to expand his world beyond the confines of the city. In recent years, by drawing visitors of all income levels from throughout the New York metropolitan area, the Museum has come to serve the additional purpose of providing a common meeting ground for children of diverse cultural backgrounds.

Exhibits

In the exhibit show window of MUSE's three-story brick building are three revolving signs -- one in French, one in English, and one in Spanish -- saying, "Welcome, this is your museum."

You enter MUSE through an orange and red door that opens into a brightly-painted curving passageway lined with child-high exhibit cases. The passageway leads directly to the reception desk in the center of the building. From there, all first-floor exhibits are close at hand. There is a small planetarium, which seats fifty; an area for changing exhibits in art and cultural history; a natural history center housing an assortment of live animals; and an osteology exhibit that invites comparison between a human skeleton and that of a young elephant.

Upstairs, on a semi-circular second-floor balcony, is an "Earth and Space Science Center" of permanent and changing exhibits, which include a pair of telegraphs for sending messages back and forth across the balcony, a giant magnet, a radar instrument that beeps when you move your hand in front of it, a light with a proximity switch, and a device with which you can activate an electric current and observe the process involved in the lighting of a neon sign. There is also an experiment in participatory art called the "MUSE Aurora Liquid Light Exhibit", for which you push a series of buttons to create abstract designs on a huge screen.

Programs Given in the Museum

In-house programs at MUSE are of two kinds -- "School Programs," which are primarily for the elementary grades, and "Public Programs," which provide a range of informal activities for people of all ages.

School Programs

Class Visit Programs. Free "Class Visit Programs" serve approximately 25,000 schoolchildren

from throughout the New York metropolitan area each year. The programs are given twice a day, Tuesday through Friday mornings and afternoons, with up to one hundred children taking part each time. Generally, morning sessions, which last two hours, are full and afternoon sessions, which last ninety minutes, are anywhere from full to halfway filled.

Upon arriving at MUSE, a class is shown through the exhibit areas by a staff member. Then the children explore the Museum on their own, taking part in activities of their choosing. The activities include informal art instruction; natural history lessons, during which animals may be petted and handled; experiments in the Earth and Space Science Center; planetarium shows; and cultural history "see-and-touch" experiences. The sessions are conducted by an Art Instructor and by three "Curator-Instructors" specializing in natural history, the physical sciences, and cultural history.

The Curator-Instructor of Cultural History works at a folding table in front of the elephant skeleton. On the table, he places artifacts selected from the Museum's stored collections and related to one another by period, culture, or function. For fourth graders, who study "Colonial America" in school, he often sets out an assemblage of Colonial objects. For first-graders, he offers dolls from a number of countries or a wardrobe of period theatre costumes for trying on; for children of other ages, there are collections representing the bones of the body, "armor through the ages," and the American Indian. The objects arranged, he stands behind his table and waits until the children begin to stop by with their questions, which are mostly, "What's that?" and "How does it work?"

As he answers, he urges his audience to touch, to pick up, to try on. He says little on the theory that detailed explaining is better accomplished on television or in the classroom than in a museum. Through actions, questions,

With the help of the Curator of Cultural History, a fourth-grader studies the bones of the body.

Students are introduced to some of the realities of life in colonial times as they discuss and handle a collection of artifacts.

and the use of analogy, he works to convey simple truths not evident to most young children -- that some acts, such as shooting and killing with a rifle are irreversible; that a person stays the same even though his clothing changes (the lesson of the theatre costumes); that other cultures have ways of doing things that work as well for them as our ways do for us. He tries also to give a realistic picture of life in other times and places; and for this reason, the assemblages he chooses as representative of particular cultures or periods generally contain a few items with unpleasant connotations; for example, a toothpuller and a mourning ring are included in the colonial collection. At some point in the presentation, the children generally ask about the elephant skeleton and he replies, "That's an elephant; he's your cousin and mine too." -- an explanation that always seems to tell them exactly what they wanted to know.

Methods. There are no captive audiences at MUSE. Classes "visit," they never tour. Curator-Instructors, relaxed and casually dressed, vary their presentations to avoid becoming bored and boring. The Curator of Natural History sometimes gives lessons with a black snake draped around his neck. To attract an audience, the Science Curator stands in his Earth and Space Science Center, seemingly oblivious to the children as he nonchalantly tosses pieces of metal at a giant magnet. Invariably he draws a crowd.

Frequently, analogy is used to relate the subject matter to the child's personal experience. The Curator-Instructor of Cultural History, while talking recently to a kindergarten class about Indian hunting practices, made this comparison: "A deer weighs as much as your teacher. Can you imagine dragging your teacher forty blocks through the woods?"

Programs for the handicapped. About 15 percent of the children who visit MUSE are mentally or physically handicapped or emotionally disturbed.

At most museums, visits from such children necessitate major alterations in approach. At MUSE, however, because the emphasis is always on tactile experiences, visits from special children require no unusual arrangements, although there are slight changes in technique. For the retarded, explanations are simplified; for the deaf, they are demonstrated rather than spoken, and for the blind, they are somewhat more verbal than usual.

Repeat Visit Programs. Repeat visit programs occasionally are offered at the request of individual teachers or schools. The programs usually relate directly to classroom studies, involve a number of visits spaced over a period of several weeks, and explore a topic of the teacher's choosing. A recent program on the physical sciences, which was developed for a community school from Manhattan, consisted of three weekly visits for nine-to-thirteen-year-olds and four weekly visits for five-to-eight-year-olds.

Public Programs

Regularly-Scheduled Informal Activities. Informal programs for children of all ages are held on weekends, after school, and on school vacations. The programs include planetarium shows and a variety of "see-and-touch" experiences in science, anthropology, and history.

Events Centered Around Special Exhibits. Events centered around special exhibits are held several times a year. In August 1971, an exhibit called "Project Weeksville; a People Uncovers its Past" was featured. The exhibit was of artifacts unearthed by archeologists at Brooklyn's Weeksville site, a nineteenth-century black community. To celebrate the exhibit, MUSE held a day-long festival called "A Day in Nineteenth-Century Brooklyn," which included puppet shows, pony rides, craft demonstrations, and food.

Workshops. Free workshops, taught by MUSE staff members and outside specialists, are offered throughout the year to children of all ages and to adults. Registrants come from everywhere in New York City. Most semesters, there is a workshop waiting list of about six hundred.

During the school year of 1971-72, workshops in theatre, sex education and drug abuse, aviation, consumer education, and public speaking were oriented to teenagers and adults; workshops in photography, art, dance, and creative writing were geared to a number of age levels, pre-school through adult; and a "Living Lab" zoology workshop was aimed at pre-teenagers. During the summer of 1971, evening workshops for adults and teenagers offered instruction in theatre, dance, printmaking, weaving, aviation, and creative writing; and daytime "Walk-in-Workshops" for youngsters, aged five to fourteen, provided informal lessons in art, science, and anthropology.

"Free MUSE Jazz Workshops," taught by known professionals, offer instruction in voice, musical theory, and a variety of musical instruments to beginning, intermediate, and advanced students. Instruments are sometimes available for use at MUSE by participants who cannot afford to rent or buy their own. In addition to the workshops, MUSE offers Wednesday-night jam sessions, in which everyone is welcome to take part, and Thursday-night concerts by well-known musicians. Jazz workshop classes accommodate about twenty-five students each; most other workshops, between ten and twenty.

Extension Services

School Loan Program

A school loan program sends Traveling Cases containing objects and explanatory written materials to an average of fourteen schools a week during the school year. Teachers use the cases both as supplements to the standard curriculum

and in the teaching of subjects of interest to individual classes. The cases are assembled from the Museum's regular "treasure chest" collection, and most of the artifacts included are originals. Teachers are urged to let students handle the materials.

There are forty cases covering subjects in natural history, cultural history, the physical sciences, and the arts. Of the sixteen "cultural history" kits, those on Colonial America and North American Indians are especially popular. A kit dealing with Indians of the American Southwest contains eleven Hopi, Zuni, Apache, and Navajo artifacts, ranging from a cradleboard doll, to silver jewelry, to a piece of horsehair rope.

The kits are stored and transported in fiberboard cases (27" long by 16" wide by 6" deep) of the type used by salesmen for carrying samples. Objects are packed in sheets of foam rubber cut to fit the form of each. The cases are bought from a manufacturer for twelve dollars apiece.

"Take-Home MUSE"

A "Take-Home MUSE Program" enables youngsters to borrow, for one-week periods, individual objects and collections of objects, such as shells, mounted butterflies, minerals and dolls. Recently refurbished, the take-home collection includes approximately three hundred kits, packaged in weatherproof vinyl boxes or drawstring bags. Each kit is accompanied by a list of suggested activities.

Staff

The Museum's entire staff of thirty-five full-time and a changing number of part-time employees is involved in some way in education programs. An Education Office is responsible for the scheduling and the general supervision

of the Class Visit Program. Three Curator-Instructors specializing in science, natural history, and cultural history and a part-time art instructor work independently and cooperatively to develop and conduct programs and class visit experiences in their fields of specialization. A Curator of Collections is responsible for the acquisition and care of collections and for the development and scheduling of school traveling cases. A Workshop Coordinator arranges, schedules, and supervises workshop programs for all ages.

The Part-Time Staff

MUSE's part-time staff is made up of the following: a changing number of paid, part-time workshop instructors; a changing number of Urban Corps college students, who are paid to work up to fifteen hours a week during the school year and full-time during the summer and vacation periods; a varying number of Junior Curators, who are high school, graduate, and undergraduate students paid by MUSE; and a changing number of unpaid teachers-in-training at New York City colleges who receive course credit for interning at MUSE. The workshop instructors, who hold regular jobs at other places, work at the Museum on weekday evenings and Saturdays. Junior Curators and Urban Corps students, whose tasks are varied, often help with the teaching of workshops and class visit programs.

Funding

The Museum's annual operating budget is approximately $460,000. About 1/3 of this money (that which pays the salaries of the nuclear staff and for the rent and maintenance of the building) comes from the City of New York. The rest is derived from a number of sources -- most notably, the New York State Council on the Arts. Every year, the Council contributes to the salaries of workshop instructors, junior curators, and two full-time staff members. In addition,

it provides special grants, recently funding the expansion of the school loan and the "take-home" collections. Additional money comes from a changing number of (from 300 to 400) "Friends of the Museum," persons who contribute anywhere from five to fifty dollars apiece annually.

MUSE is a department of the Brooklyn Institute of Arts and Sciences, a complex of cultural institutions which includes also the Brooklyn Museum and the Brooklyn Botanic Garden. The Institute provides accounting and other administrative services.

Coordination with Schools

Museum Programs and the School Curriculum

Both the Class Visit Program and the School Loan Program serve primarily grades three, four, and five. The programs are designed to be flexible so that each can be used by teachers in a variety of ways. Often a teacher calling to arrange a class visit will ask that a certain topic be included on the agenda for her scheduled day or that stress be placed in a particular area. Usually such requests are granted.

Teaching staff members are individually responsible for seeing that programs are geared to appropriate grade levels. As aids to achieving this end, the Curator Instructors receive, at the beginning of each week, schedules showing the grade levels, school names and locations, and class sizes of visitors for that week.

Program Development

In-house programs. The format for the present Class Visit Program was developed in 1971. Before that time, programs had lasted forty-five minutes, with each class exploring in a sit-down situation, only one activity area. The new program was tested on a group of third-through-fifth-graders who spent a morning at MUSE, having been sent, prior to their visit,

maps of the exhibits.

Repeat Visit Programs are worked out in advance with the teachers who request them. After discussing with a teacher her class's interests, the museum teaching staff meets to develop a program outline and to decide how each discipline will fit into the proposed scheme. Then each staff member develops the component of the program relating to his field. Finally, the components are fitted together; and the Supervisor of Education discusses the resulting plan with the teacher. The entire process usually takes several weeks.

The School Loan Program. The school loan program as it now exists was begun in 1968, when the Museum moved to its present location. Before that time, loans had been made haphazardly, with artifacts sent to the schools without staff supervision or supporting information. Since 1968, the Curator of Collections has worked steadily to build the kits and to write their teacher's guides. Many of the units, including one on African musical instruments and one on prehistoric man, were developed in response to requests from teachers.

Informing Teachers

Announcements of the Class Visit Program are sent in September and January to all public elementary schools in New York City and to many private and parochial schools. The announcements are sent also to individual teachers upon request.

Scheduling of Class Visits

Teachers make reservations for class visits by telephoning the Education Office Tuesday through Friday at scheduled times. The school year at MUSE is divided in two semesters. Booking of visits begins in September for the first semester and in January for the second. By the end of a semester's first two weeks, most appointments for that period are filled. Since classes

from different schools intermingle at MUSE, visits are scheduled according to grade level. Several afternoons a semester are reserved for children with severe handicaps. Youngsters with minor handicaps are scheduled with regular classes.

Teachers who have made reservations are sent confirmation cards explaining MUSE's freedom-of-choice policy and indicating the date and time for which the appointment has been made. When a teacher arrives at the Museum, she identifies her class by presenting her confirmation card at the information desk.

Scheduling and Distribution of Traveling Cases

To order a traveling case from the school loan collection, a teacher writes to the Curator of Collections. She may reserve four cases a semester and keep each case for nine days. Scheduling is done in the order in which requests are received.

A van from the Museum delivers kits to the offices of Brooklyn schools every Tuesday during the school year and picks them up the following Friday. Teachers from schools outside Brooklyn may borrow kits but must make their own arrangements for transporting the units. About 90 percent of the loans are made to Brooklyn schools, the number of loans being limited by the number of stops the van can make in one day.

Facilities

MUSE will occupy its present building until about 1974, when its new Brower Park facility should be ready for occupancy.

Remodeling of the present building was completed in 1968 with a budget of $40,000. Special architectural features are the enclosed entranceway, which leads directly to the center of the building, and the balcony, which serves not only as an exhibit area but also as an

observation point from which children enjoy watching activities on the floor below. The education staff finds this design to have both advantages and disadvantages. While the building's atmosphere of spaciousness and freedom are beneficial, its noisiness -- sounds carry from one open exhibit area to the next -- often is distracting to children and staff.

Workshop spaces are set aside for art classes, music classes and laboratory experiments. An art room is outfitted with a kiln and a silkscreener; a laboratory has dissecting and other equipment. A music room serves as a performance area and a studio.

MUSE's new building will be partly underground. The landscape of Brower Park will extend across the roof, which will be planted with trees and grass and have paths and elevated areas for museum activities and community recreation.

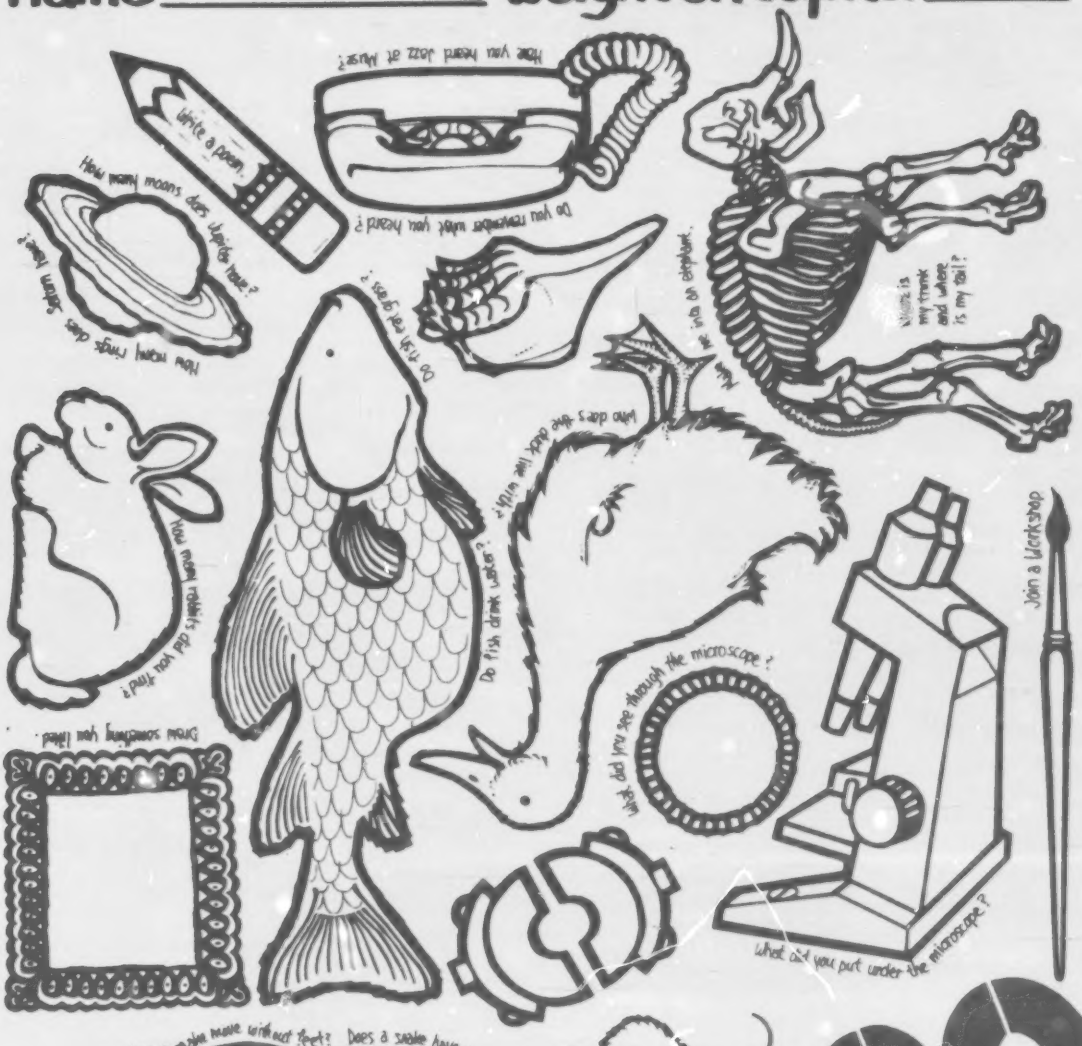
Inside, the Museum will have three levels of exhibit space. Access to the levels will be by a tubular ramp that will descend diagonally from the entrance on the park level. On all three levels, offices, classrooms, and workshop spaces will be juxtaposed with exhibit areas. Glass walls between the areas will allow the visitor to view simultaneously activities in several parts of the Museum. Beneath the indoor exhibit levels, will be an outdoor exhibit area visible from an observation bridge in the Park, twenty feet above.

The cost of the new building, which was designed by the architectural firm responsible for the remodeling of the present facility, will be about $4,000,000.

Publications

The Brooklyn Children's Museum -- a six-page illustrated brochure describing the Museum's

name _____ weight on Jupiter _____


How many rings does Saturn have?
How many moons does Jupiter have?
Write a poem.
Have you heard Jazz at Muse?
Do you remember what you heard?
What is my trunk and where is my tail?
Join a Workshop
How many rabbits did you find?
Do fish drink water?
Draw something you liked.
What did you see through the microscope?
What did you put under the microscope?
How does a snake move without feet? Does a snake have ears?
What was the design on the snake?

Bring Someone You Love

muse

Operated by the Brooklyn Children's Museum
1530 Bedford Avenue (corner of Lincoln Place)
Brooklyn, New York 11216 / (212)774-2900

The Brooklyn Children's Museum is a department of the Brooklyn Institute of Arts and Sciences
This poster was printed through the courtesy of Shell Companies Foundation

programs and explaining the philosophy behind them. The brochure is given to adult visitors.

At MUSE -- a monthly calendar of events, sold at MUSE for 10¢ a copy and, by subscription, for $1.00 a year. The calendar features a column, "Director's Notebook", for which the Director of the Museum writes a short item each month on a special exhibit or event. Included are a map showing MUSE's location and directions for getting there by subway or automobile.

Wall Poster -- a poster given to young visitors as a souvenir. The illustrations are of objects representing exhibits and activities at MUSE. Youngsters color the objects and answer accompanying questions, such as "Do fish drink water?" "Does a snake have ears?" At the top of the poster is a place for a child to write his name and his "weight on Juniper"; at the bottom are the Museum's address and phone number and an invitation to return for another visit.

Class Visit Program Announcement -- an announcement which opens to become a poster that gives procedural instructions for arranging a class visit as well as an explanation of MUSE's "freedom-of-choice" policy.

Teacher's Guides -- mimeographed materials accompanying traveling case exhibits. Each guide contains general background information about its case as well as specific data about individual items.

THE HAGLEY MUSEUM

Purpose:	To preserve and to interpret Eleutherian Mills, a site representative of nineteenth-century industrial development in the United States.
Governing Authority:	Private; affiliated with the Eleutherian Mills Historical Library.
Location:	On the Brandywine River, near Wilmington, Delaware.
Community Served:	The three counties of Delaware and nearby counties in neighboring states.
Year of Founding:	1954, by the Eleutherian Mills and Hagley Foundation.
Collections:	American industrial history.
Facilities:	Nine restored buildings. A Museum Building once a mill, houses offices and three floors of exhibits.
Education Programs:	In-house and extension programs for children and adults are offered through a School Program Office and a Tour Office.
Education Staff:	Two regular staff members (one full-time and one part-time) and approximately sixty part-time paid guides.
Hours:	From 9:30 a.m. to 4:30 p.m., Tuesday through Saturday, and from 1:00 p.m. to 5:00 p.m. on Sunday.
Admission:	Free.
Attendance:	Approximately 110,000 visitors a year.

For further information, write to Mrs. Jane MacAdam, Coordinator of School Programs, The Hagley Museum, Greenville, Wilmington, Delaware 19807.

THE HAGLEY MUSEUM

The dams, millraces, and nine restored buildings of the Hagley Museum occupy a strip of land extending along the Brandywine River for 1-1/4 miles at Greenville, near Wilmington, Delaware. Founded in 1954 and affiliated with a neighboring institution, the Eleutherian Mills Historical Library, the Museum is dedicated to the preservation and interpretation of a site representative of nineteenth-century industrial development in the United States -- that of a powder manufactory yard established in 1803 and run until the 1920's by the DuPont family.

Exhibits

A Museum Building, once a mill, has three floors of exhibit space. Many exhibits are working models or working, "talking" dioramas, operated by pushbuttons. On the building's first floor, models, dioramas, and artifact displays illustrate the early industrial history of the Brandywine Valley prior to the establishment of Eleutherian Mills; and a series of dioramas depict the life of the DuPonts during the years immediately before and after the family's emigration to this country. Second-floor exhibits trace the development of American industry through the latter half of the nineteenth and early twentieth centuries and show working conditions and major industries of the times. Emphasis is on the DuPont Company and its role in the industrial growth of the nation. A favorite teaching exhibit is an electronic map illustrating the pattern and pace of Westward expansion. Third-floor exhibits, which are temporary, feature materials, tools, and techniques of the nineteenth-century artisans responsible for the early industrial architecture of the Brandywine Valley. There are several devices for visitors to operate -- a block and tackle, a wooden screw conveyor from a flour mill, and an 1870's hole-boring machine.

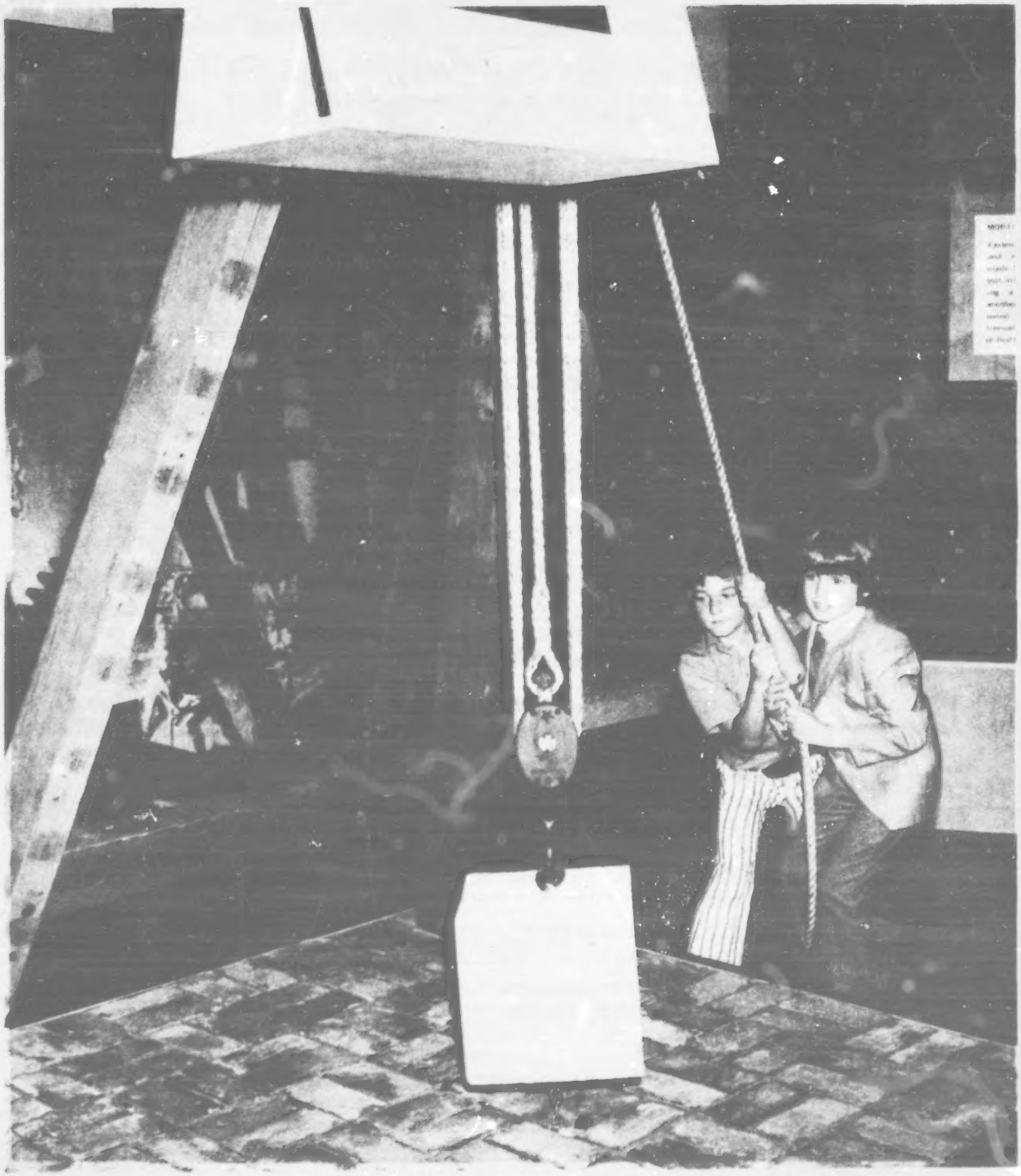
Upstream from the Museum, i a Black Powder Exhibit Building, where working models and dioramas illustrate steps taken in the manufacture of black powder in the DuPont Mills. Further up the river, are the DuPont residence, built in 1803 and occupied until 1957; a small "First Office" Building, which served as early company headquarters; the "Lamont DuPont Workshop" filled with mid-nineteenth-century laboratory equipment; a barn housing a restored cooper shop and collections of agricultural implements, weather vanes, and horse-drawn vehicles; and Gibbons House, a worker's cottage featuring a "see-and-touch" room furnished with late nineteenth and early twentieth-century pieces. The Residence, the First Office, the Workshop, and the Barn are open only in the late spring and the early fall. The other buildings are open year round.

Programs Given in the Museum

General Survey Tours

General Survey Tours, given during the school year for the purpose of reinforcing classroom studies, are the Museum's most popular educational offering. Led by paid guides, the programs last two hours when given to groups of the fifth grade level or above and an hour to an hour and a half, when given to younger children. Fourth-graders studying Delaware history are the most frequent participants. In 1971-72, 24,328 children took part.

Although the programs present a broad view of the Museum, they are somewhat selective in that no single tour visits every exhibit or every building. After a standard introduction, each class concentrates on displays pertaining to its area of classroom study. A typical tour consists of an hour in the Museum Building, where students view all first-floor exhibits and selected second-floor exhibits and work demonstration machinery on the third floor; a half-hour bus ride through the property; and visits to several other exhibit areas. The theme of the tour -- that of industrial



Students operate a block and tackle during a visit to the Museum Building.

development in the United States as seen along the Brandywine -- is brought out as students consider some of the ways in which technological improvements have changed man's way of life. On the first floor of the Museum building, the youngsters follow man's progress in a single basic enterprise -- grinding grain -- as they compare methods used by a Lenni-Lenape Indian woman, early Swedish settlers, later English colonists, and inventor Oliver Evans, whose "automatic flour mill" revolutionized the milling industry in this country and abroad. Further development of the theme depends on the exhibits visited.

Methods. Guides are careful not to overwhelm students with dates and technical terms. Generally, a guide will present some background information about an exhibit, ask a few thought-provoking questions, and then stand back and let the youngsters look. Because exhibit areas cannot accommodate crowds, each phase of every tour is scheduled so that no more than one group of twenty students is in an exhibit area at a time. A tour guide is provided for every group of twenty, and a hostess guide is stationed in each area to direct traffic. If a class arrives late on a busy day, its tour plan is changed so that the late-comers will not interfere with other groups. Because children are given a variety of things to do and the bus ride provides a rest in the middle of the tour, "museum fatigue" is seldom a problem.

Henry Clay Day

Since 1970, fifth grade classes from the nearby Mt.Pleasant School District have been taking part in a program at Hagley that relates to an eight-week course of classroom study called "America in Transition: an Agrarian to an Industrial Economy."

The purpose of the program is to deepen the students' understanding of the period under study by giving them the chance to experience

life in a nineteenth-century industrial village.

Developed by a fifth-grade teacher taking a summer course sponsored by the Museum (to be described), the program involves, in addition to supplementary classwork, three three-hour sessions and two final day-long exercises at Hagley. During the three-hour sessions, students follow guide sheets to conduct document, artifact, and site analyses. For the day-long exercises -- called Henry Clay Days in honor of a visit Henry Clay made to Eleutherian Mills when he was running for President -- the children dress in period costumes and participate in a variety of nineteenth-century crafts and technologies under the guidance of Museum staff members. The activities include soap and candle making, gardening, butter-churning, quilting, rug braiding, weaving, spinning and the making of stocking dolls.

Half of the approximately four hundred students taking part in the project attend the first "Henry Clay Day;" and half, the second. The days are planned so that all students participate in two ninety-minute craft or technology sessions of their choosing and in a three-hour exercise in nineteenth-century school life modeled after the "Brandywine Manufacturers Sunday School," a school once held at Eleutherian Mills. In addition to these activities, the day features a lunchtime political rally with speeches, music, and campaign posters.

Other Programs

Special Focus Tours. Experimental "Special Focus Tours" are offered in the winter and the early spring to upper-elementary classes. Developed to attract off-season visitors, the tours are given in limited numbers. (There were fifteen in 1971-72.) Each program draws on selected exhibits to illustrate a theme that relates to the curriculum of area schools.

"Nineteenth-Century Lifestyle, at Home and at Work," one of five programs offered, analyzes in ninety minutes, community life in a mid-nineteenth-century industrial village -- a theme pertaining

Henry Clay Day activities

to units on "community life" taught in fifth grade classrooms. A brief introductory slide talk is followed by a visit to the Gibbons House where children play an "inquiry game," trying to identify and categorize an assortment of unfamiliar household objects (a buggy weight, a sad iron, a skirt lifter, etc.) while the guide asks questions that help them to formulate hypotheses and draw conclusions. After a half-hour ride through the Museum grounds, when the guide points out buildings important to community life, the youngsters view pertinent exhibits in the Museum Building.

Foreign Language Tours. Tours in French occasionally are given to high school students. Hagley buses can be fitted with a taped narrative describing in French sights seen on a standard tour of the grounds; and a "talking map" on the first floor of the Museum building can be fitted with a French version of a tape explaining the geography of the Brandywine Valley. Participants ride the bus, listen to the map, and view dioramas of the DuPonts in post-revolutionary France.

Pilot Program for Inner-City Class. A pilot program for a class of sixth-graders from Wilmington's inner city is being planned jointly by the Museum and the teacher of the class. The program will involve three sessions at Hagley when selected guides will work with small groups of students. Before the first session, the women will visit the classroom to become acquainted with the children. There will be no formal lesson plans. The program will be kept open, its focus determined by student interest. Possibly, transportation to and from the Museum will be provided by the Wilmington National Guard.

In the past, Hagley's efforts to reach inner-city classes have been hampered by transportation difficulties. Because the Museum is located in an area not served by public transportation, school groups must reach it by school bus. Although suburban school districts usually have buses for museum trips, urban districts frequently do not. A 1970 pilot program for

inner-city youngsters failed to lead to anything more extensive because of limited opportunities to bring children to the Museum.

Museum Aide Program. A "Museum Aide" program for senior Girl Scouts introduces participants to methods of doing research with primary source materials. From the resources of the Eleutherian Mills Library and the Museum, the girls develop projects used by the Museum in the teaching of younger scouts and students. Currently the program has fifteen participants.

The girls meet at the Museum once a month with a guide, who acts as their leader. Between meetings they work at individual or group projects, such as writing stories for children about life at Hagley in the nineteenth century, building models of dioramas, and sketching and photographing the site. In 1972, several of the girls collaborated on a research paper about the teen-aged DuPont daughters who lived at Eleutherian Mills. The paper is based on letters written and received by the daughters.

Junior Science and Humanities Symposium. A once-a-year "Science and Humanities Symposium" gives outstanding high school students a tour of Hagley's exhibits and grounds and the chance to talk with members of the Museum's curatorial staff. One facet of a broader program offering selected students from throughout Delaware the opportunity to examine career possibilities in their fields of interest, the symposium brings about thirty young people to the Museum each year.

Extension Services

Assembly Programs

Three or four times a year, staff members give assembly programs in area schools. One guide presents a yearly program on the history of communication, illustrating her talk with artifacts and slides of museum exhibits.

The Museum's Coordinator of School programs occasionally gives a program in honor of "Delaware Day" -- the anniversary of Delaware's ratification of the Constitution.

The Loan of Audiovisual Aids

The Museum has three "teaching aids", which it loans to teachers for one-week periods for use in preparing classes for museum visits. These are (1) a kit containing thirty-one slides of museum exhibits and a written script; (2) a set of twelve photographs of the Museum; and (3) a 16 mm sound color film, The DuPont Story.

Staff

A Tour Office and a School Programs Office are responsible for the programs just described. Together the offices are staffed by two regular employees: a Coordinator of School Programs, who works three days a week, and a full-time Tour Reservation Secretary. These positions are augmented by a part-time paid guide staff of approximately sixty.

The Coordinator plans programs, writes brochures and teacher's guides, oversees the training of guides, and directs tour activities for both school and adult groups. The holder of a Bachelor of Science degree in education, she has worked as a secretary, a substitute teacher, and a Hagley guide and has been active in volunteer community work, serving as president and vice-president of a local school board.

The Guides

Backgrounds and Duties. The guides are middle-aged women, most of whom are college-educated and many of whom have had classroom teaching experience. Fourteen work only as tour guides; the remaining work both as "hostess guides," stationed in exhibit areas to answer questions and direct traffic, and as tour guides. After participating in a sixty-day apprenticeship, a guide is paid $15.75 for working on weekdays

and $18.75 for working on Saturday or Sunday. Apprentice guides are paid $12.25 a day.

Several experienced guides are given the special title of "Deputy Tour Director". They act as traffic managers, help with tour scheduling, and substitute for the Coordinator of School Programs when she is on vacation. Together with two Senior Guides (chosen on a rotating basis), the directors form an Advisory Committee that helps to plan workshops and field trips for guides and to settle matters of retirement and guide management.

The Museum has no difficulty in recruiting guides, but in 1972, it found it necessary to invoke a retirement policy. Retirement age was set at seventy-two for that year and will regress one year every year until 1976, when it will reach sixty-eight. All guides are white, although the Museum has tried to recruit black women.

Training. For her initial training, a guide must take a semester-long graduate-level course on the industrial history of the Delaware area, taught by the Foundation's research staff; pass a written test; observe a minimum of three tours given by experienced guides; and conduct three trial tours under the scrutiny of the Coordinator or a senior guide. After each trial, the observer discusses with the initiate, tour content and techniques of presentation.

To augment their initial training, the guides attend biannual workshops, where information is updated and techniques discussed, and take field trips to historic sites and other museums. For the past year, the Museum has arranged for guides to visit area classrooms during the school day. The visits, made voluntarily, give the women the chance to see children in a classroom situation and to observe modern teaching methods. Guides who give Special Focus Tours have been trained by the schoolteacher who developed Henry Clay Day to conduct inquiry games and other inductive exercises. The Museum hopes to train more guides to use inquiry techniques.

Funding

The Museum's annual operating budget is between $500,000 and $1,000,000. An undisclosed amount, based on estimates made by the Coordinator of School Programs, is set aside yearly for education programs. The Museum receives all of its money from private sources, through the Eleutherian Mills and Hagley Foundation.

Coordination with Schools

Museum Programs and the School Curriculum

In 1968, the Museum held a series of four principals' conferences to explore ways in which Hagley (Museum and Library) resources could be used to enrich school curricula. Between sixty-five and a hundred principals from schools throughout Delaware and two counties in Pennsylvania attended each conference. As a result of the meetings, the Museum formed an "ad hoc advisory committee" of supervisors and teachers from area schools, and with the help of the committee, developed an information kit (to be described) to aid teachers in preparing classes for Museum visits. In addition, copies of curricula currently in use in the schools were collected and placed on file in the School Programs Office.

The Museum will hold another advisory committee meeting soon. Tentative plans for new programs will be discussed, and again the members will be asked for suggestions. In between committee meetings, the Coordinator of School Programs meets informally with individual teachers and school administrators to plan student programs and teacher workshops.

Most students participating in Hagley school programs are in the fourth and fifth grades, the levels at which Delaware history and American history are taught in Delaware Public Schools. Efforts are being made to broaden the age range of participants. Soon a two-hour activity program

on ways in which man has used tools through the ages will be given on an experimental basis to sixth and seventh graders, who study the Industrial Revolution in school. The Museum hopes also to develop a "Lafayette Day," similar in plan to "Henry Clay Day," for high school French students.

Training Teachers

A Graduate Course for elementary and secondary social studies teachers has been offered by the Eleutherian Mills and Hagley Foundation (Museum and Library) since 1970. Developed by the Mount Pleasant School District, the University of Delaware, and the Foundation, the course is open to sixteen experienced teachers each summer. Its purpose is to instruct participants in the use of community resources and in the development of materials suitable to the "inquiry-oriented" method of teaching social studies. Participants earn six credits at the University of Delaware.

The course takes five weeks to complete. For a week, teachers attend daily lectures given at the Library by various Foundation specialists. The lectures introduce participants to source materials available at the Library and the Museum. At the end of the week, each teacher chooses a project and spends the remaining four weeks in independent study, using Museum and Library resources to develop a study unit, a series of model lessons, a resource kit, or some other "teaching-learning experience."

During the first year the course was offered, participating teachers developed eight teaching units -- among them, "Leni-Lenape Indians," "DuPont Road" (on land transportation) and Brandywine Manufacturer's Sunday School (on education). During the following school year, some of the units were piloted, and as projects for the summer course of 1971, they were revised. Now they are in use as a regular part of the curriculum in Mt. Pleasant Schools. Additional units were developed in 1972.

Informing Teachers

Workshops: Orientations for teachers are held throughout the year. A workshop for Wilmington teachers in their first three years of teaching was given in 1971 to acquaint participants with the Museum and to make them feel that visits from their classes would be welcome. As part of a community-wide, week-long program, an annual day of tours and lectures to teachers new to Wilmington is given. In 1971 the day included a tour of the Museum and addresses by two community leaders. Presently, the Museum is planning as a part of "Del Mod," a statewide project for the improvement of science teaching in Delaware public schools, to hold a workshop for science teachers on the study of the history of technology. Occasionally, orientation tours are given to students from nearby teachers' colleges.

Publications. Brochures, mailed to schools throughout the State, and a newsletter for teachers, published by Delaware's State Department of Public Instruction, help also to inform teachers of Museum programs.

Scheduling Tours

All visiting groups must have a reservation and a guide. Reservations for General Survey Tours are made a week in advance and those for Special Focus Tours, two weeks in advance. Although reservations may be made by mail, the Tour Reservations Secretary prefers they be made by telephone so that she and the teacher can work out a plan together.

From the teacher, the Secretary obtains the following information, which she records on a "scheduling card": the name, the address, and the telephone number of the school; the size, the grade, and the ability level of the class and the classroom subject to which the tour is to relate; the exhibits the teacher wishes to visit; the teaching aids she wishes to borrow;

and whether she wishes to reserve lunchroom space. The Tour Director or a deputy tour director then outlines the plans for the tour on a chart to show which exhibits will be visited and when. Later, as other tours are scheduled for that day, she outlines those plans on the same chart. This procedure provides a reference for guides and insures that tours do not overlap.

In the information kit sent to teachers who have scheduled tours, is a confirmation slip, which the teacher must fill out, sign, and mail to the tour office. By duplicating the information contained on the scheduling card, the confirmation slip serves as a double check and provides a written record, signed by the teacher and available for reference should a question arise regarding plans for the tour.

A teacher coming from outside the Wilmington area may request lunchroom space when she schedules her tour. Classes are allowed half an hour for lunch.

Facilities

A mill downstream from the Museum Building has been remodeled for use by school groups. The ground floor of the mill, which serves as lunchroom, classroom, and workshop and accommodates about sixty children, contains built-in storage shelves and cabinets for holding audiovisual aids and tactile artifacts; a wooden cabinet on wheels that has a screen for showing slides and storage space beneath for audiovisual equipment; and lightweight tables and chairs that can be folded and stored against the wall.

Publications

The Hagley Museum Tours -- a brochure describing school programs and outlining procedures for making tour reservations. Revised annually, the publication is mailed, at the beginning of the

school year, to schools throughout Delaware and, during the school year, to teachers who request tour reservations.

Teacher's Guide -- a kit containing a bibliography, a list of teaching aids, a vocabulary list, a worksheet map, a list of suggested topics for elementary school reports and an "evaluation sheet," on which the teacher is asked to suggest ways in which her tour could be improved and to indicate whether its content, level of presentation, length, and timing were suitable. The guide is designed for classroom use before and after a General Survey Tour.

Guide Manual -- a handbook compiled for use by Hagley guides. The booklet includes information about tour management and safety rules, exhibit operation, guide responsibilities and training, and miscellaneous policy matters.

THE MUSEUM OF AFRICAN ART

Purpose: To promote understanding and appreciation of African art and culture; to educate the black and the white communities through an interdisciplinary approach.

Governing Authority: Private.

Year of Founding: 1964.

Location: Capitol Hill, a residential section of Washington, D.C.

Community served: The greater Washington area.

Facility: A three-story nineteenth-century townhouse. Remodeled in 1970, the house accommodates exhibits, an auditorium, and offices. Three other townhouses on the same block house additional offices.

Collections: Traditional African sculpture, musical instruments, textiles, and crafts, Frederick Douglass memorabilia.

Education Programs: In-house and extension programs for children and adults are offered through a Department of Education.

Education Staff: Two full-time and one part-time staff members.

Hours: From 11 a.m. to 5 p.m. Monday through Friday and from 12:30 p.m. to 5:30 p.m. on Saturdays, Sundays and holidays.

Admission: By contribution (suggested contribution: 25¢ for children and 50¢ for adults).

Attendance: Approximately 45,000 visitors a year.

For further information, write to Mr. Crispin Chindongo, Education Coordinator, Museum of African Art, 381 A Street, N. E., Washington, D.C. 20502

THE MUSEUM OF AFRICAN ART

The Museum of African Art occupies a recently-remodeled, three-story, nineteenth-century townhouse -- once the home of black abolitionist, Frederick Douglass -- in Washington, D.C.'s residential Capitol Hill. The Museum was founded in 1964 for the purpose of promoting understanding and appreciation of African art and culture.

Exhibits

On the Museum's first two floors are twelve galleries holding changing and permanent exhibitions of African art. Currently on display are more than four hundred sculptures in wood, stone, bronze, ivory, and gold along with jewelry, pottery, and textiles representing ninety African peoples. A permanent second-floor exhibit juxtaposes African art and Western art to demonstrate the importance of African influences. On the third floor, are a "Frederick Douglass Memorial Room," furnished with period pieces and artifacts associated with and used by the black leader, and an auditorium, seating 110, that displays a collection of African masks, musical instruments, textiles, and carved figures. In the front of the auditorium, on a small, spotlighted stage, a Senegalese balaphone and drums of assorted shapes and sizes stand against a backdrop of handwoven "country cloth" from Niger. Tape-recorded African music is piped throughout the museum.

Lecture Tours

Monday through Friday, in the morning and the afternoon, museum instructors give seventy-five-minute "lecture tour programs" to groups of children and adults. Each year, approximately thirty thousand visitors, about 85 percent of whom are schoolchildren from the Washington area, take part. The size of the groups generally is limited to fifty. A typical program consists of an hour-long orientation and a fifteen-minute gallery tour.

The orientation, held in the auditorium, starts with a forty-five-minute lecture that prepares students for their gallery visit by dispelling some of their misconceptions about Africa. The instructor begins by questioning the youngsters to determine the extent of their knowledge. He asks them to name the countries of Africa and what they would find on a visit there. Their answers present a picture of a vast, steaming jungle inhabited by lions, tigers, and medicine men. After pointing out that this stereotype is derived from popular television programs and movies, which often are unreliable sources, the instructor describes the continent's ancient kingdoms, modern cities, and geographical and cultural diversity; defines the place of the arts in African culture; and explains a number of the symbols occurring frequently in African sculpture, illustrating his talk with maps, photographs, slides, and exhibit materials.

Following the lecture, he invites several volunteers to come forward and model a wardrobe of traditional African garments, including a dashiki, a turban, and a toga. Subsequently, more volunteers take part in a grand finale of a "jam session," that involves the playing of an African song on thumb piano, bells, reed harp, drums, and balaphone. Students not playing instruments participate by singing and clapping.

After the "jam session," in the Frederick Douglass Room, the instructor explains briefly the significance of Douglass's work. Then he leads the students downstairs through the galleries, where he points out pieces of sculpture illustrative of symbolism explained during the orientation. There is no formal lecture in the gallery.

Methods. The Museum's approach to its subject is interdisciplinary, presenting African art in a cultural context.

To help students understand the African point of view, instructors frequently draw analogies relating African customs and beliefs to the Western experience. For example, they often point out that like Africans, we too use animal symbolism and that one example of this can be found in the names of our football teams.

Exhibit labels draw analogies also:

> In Africa the ancestors have a position of great importance in the religious and social life of the community. Many of the African figures and masks are designed to involve the ancestors in acts of social control as well as in religious ceremonies. Their religious use is comparable to the Christian concept of saints as intermediaries between God and man. Their political use is analogous to the practice of American politicians who invoke the names of earlier leaders -- Roosevelt, Kennedy, Eisenhower, Lincoln -- to gain support for a policy or a candidate.

Programs for the Handicapped

Lecture tours for the physically-handicapped are given several times a year. An annual program for crippled children from Washington's Sharp Hill School takes place entirely on the Museum's first floor. After a lecture and a "jam session," the children visit first-floor galleries. Another annual program, for youngsters from Washington's School for the Blind, provides one instructor for every ten students. The children handle pieces of sculpture selected to give a "tactile-visual" experience, and again a jam session is the high point of the program.

Extension Services

Workshops in the Community

The Museum loans approximately sixteen small exhibits a year to schools, churches, colleges, universities, and neighborhood centers in the Washington area. The displays are set up by Museum staff members, and loan periods range in length from several days to a year. Materials include panel graphics relating to the black experience as well as pieces of African sculpture. Many of the exhibits are augmented by one or more workshops taught by Museum instructors.

During the summer of 1972, workshops given at exhibit sites included a series of four hour-long programs for children of elementary school age on mask-making, tie dying, musical instrument making, and African games and stories; a similar series for Washington's "Summer in the Parks" program; and an hour-long orientation workshop following the same format as the orientation given in the Museum. In addition, the Museum assisted the U.S. Department of State with a "Widening Horizons" program for inner-city youngsters and, as in previous years, took part in "African Heritage Day" -- an annual day-long festival sponsored by the D.C. Park Department and attended in 1972 by more than five thousand children and adults.

Programs in the Schools

Classroom lessons and assembly programs are given from time to time for area schools unable to bring students to the Museum. Usually an in-school program consists of a "fashion show," a jam session, and an orientation lecture illustrated by slides or a film-strip. In 1971-72, slightly more than fifty such programs were given in the schools.

Radio and Television Programs

Several times a year, the Museum does programs aimed at a general audience for local radio and television stations. For a recent half-hour Saturday-afternoon program, a staff instructor presented a condensed version of the museum orientation lecture. Another recent staff-conducted program on African masks was part of a series called Images and Things produced by an educational television station.

Production of Audiovisual Materials

Two audiovisual teaching aids, featuring photographs taken in the Museum of objects from the Museum's permanent and loan collections, have been produced for classroom use. The first of the two is a slide kit, Values in Traditional African Art, for junior high and high school students. It includes, in addition to sixty slides and a tape-recorded narration, eight blown-up photographs suitable for bulletin board display and a teacher's guide containing slide annotations and a bibliography. The kit was

developed by the Museum's Public Relations Officer and is being marketed by the Encyclopedia Britannica Education Corporation. The second of the two, a filmstrip for sixth-graders, entitled African Art and Culture, is one component of a five-part series on Africa, produced by the National Geographic Society.

Staff

A Department of Education, responsible for the programs described here, is staffed by a full-time Education Coordinator, a full-time Instructor, and a part-time Senior Instructor. The three conduct Lecture Tours, orientations for teachers, and workshops and develop curriculum materials. The Education Coordinator has the additional job of scheduling lecture-tour programs.

The Education Coordinator, a native of Malawi, Africa, and a graduate student at Howard University, is a painter and a sculptor. He has taught both at Howard and at a college in Malawi.

The Instructor is a native of Nigeria and a graduate student at Howard.

The Senior Instructor, who has a Bachelor's degree in art education, has lived and taught in Africa.

Funding

The Museum's annual operating budget for administration and programming is between $200,000 and $250,000. Additional budget provisions are made for building and the establishment of an endowment fund. Each year, about one-third of administration and programming money is spent on education programs.

Since 1964, the Museum has received two large grants: a five-year $1,000,000 matching grant, in 1970, from the National Endowment for the Humanities (Division of Public Programs) and a three year $250,000 grant, in 1967, from the Ford Foundation.

Additional sizable grants have been obtained from the Samuel H. Kress, Old Dominion, Rockefeller Brothers, Vera G. and Albert A. List, J.M. Kaplan, Eugene and Agnes Meyer, and United States Steel Foundations. These have been supplemented by small grants from large corporations and occasional contributions of services from local businesses.

From 1967 to 1970, the Museum received, through the D.C. Public Schools, $79,254 from the U.S. Office of Education (money made available by Title III of the Elementary and Secondary Education Act of 1965) to support an Interdisciplinary Resource Center on the Negro Heritage (to be described).

A small proportion of income is derived from admission contributions, gift shop sales, and the sale of the Encyclopedia Britannica filmstrip described previously.

Coordination With Schools

Museum Programs and the School Curriculum

Lecture-tours are given with varying degrees of sophistication to children of all ages and in connection with a range of classroom subjects that include "Africa," "world history," and "comparative cultures." The programs are given most frequently to fifth and sixth grade classes from both City and suburban schools.

Interdisciplinary Resource Center on the Negro Heritage

As was indicated previously, Title III money from the U.S. Office of Education made possible, from 1967 to 1970, a museum-conducted "Interdisciplinary Resource Center on the Negro Heritage." Through this vehicle, the Museum developed a loan exhibit and a number of special programs and curriculum aids in cooperation with the District of Columbia Public Schools.

The loan exhibit, "Afro-American Panorama," is a series of panel displays honoring black contributors to American society, from John Garrido (an Afro-Spanish explorer who introduced wheat to the New

World) to Ralph Ellison and Jesse Owens. Special programs included orientations for teachers, given both at the Museum and in the schools; seminars on African culture for student teachers; a lecture series for teachers on African culture; and an increased number of school assembly programs. The curriculum aids were a booklet, Afro-American Panorama, written both as a guide to the exhibit and for general classroom use, and the filmstrip kit, Values in Traditional African Art.

In the spring of 1970, the funds supported a program that sent the Museum education staff to five City high schools (four black and one racially mixed) to work with teachers and students of English and social studies. The purpose was twofold: to reorient the thinking of the students and to demonstrate to teachers, methods and materials developed by the Museum. Three staff members spent a week at each of the five schools. At the beginning of each week, they asked students to fill out a questionnaire that functioned as an indicator of the students' knowledge about Africa. Based on the results of the questionnaires, the staff tailored its teaching to the level of each group. At the end of the five weeks, a team of educators from George Washington University attempted to evaluate the program, using interviews with teachers and a questionnaire for students to determine how much the students had learned. Although the evaluation was generally favorable, the Museum found it disappointing because it failed to produce objective data and constructive criticism.

Informing Teachers

Through the programs just described, the Interdisciplinary Resource Center informed District teachers of Museum services. To ensure continuing teacher awareness now that Center funds are no longer available, the Museum distributes posters and leaflets advertising exhibits and a teacher's guide explaining the lecture-tour program to City and suburban schools; holds workshops for teachers; and works through a Washington-based organization of teachers and museum educators, Museum Education Roundtable (to be described).

The workshops, which are held throughout the year, reached approximately two hundred D.C. Public School teachers in 1972. A typical session consists of a lecture outlining the Museum's point of view and suggesting approaches to the teaching of African culture in the classroom; a description of the lecture-tour program; a "jam session;" and a gallery tour. Sometimes a film presenting African art from an African point of view is shown.

Facilities

In addition to a street entrance, used by the general public, the Museum has a rear entrance for use by tour groups. Upon entering by this door, students proceed directly up an enclosed stairway to the auditorium, where they are seated for the orientation lecture. Thus, they are kept from seeing the gallery exhibits until after their orientation. The auditorium is equipped with projectors and a screen for showing movies and slides.

Publications

Afro-American Panorama -- a twenty-four-page guide to the exhibit of the same name. The publication contains a photograph of exhibit materials and short biographical sketches of black Americans who made important contributions to the Nation's development. It is used by teachers, both in connection with the exhibit and as an aid to the teaching of black history in the classroom.

General Teacher's Guide -- a guide explaining the purpose and content of the lecture-tour program. Currently in preparation, the publication will help teachers to prepare students for Museum visits.

Specialized Teacher's Guides -- a series of guides, presently under development, that will be used in the classroom in the teaching of African art and culture as well as in connection with Museum visits. Each of the publications will provide detailed information about one or two aspects of African culture. The form of the guides will be determined by answers received on a questionnaire circulated among teachers.

THE AFRO-AMERICAN CULTURAL DEVELOPMENT CENTER, INC.

Purpose:	To promote pride in, and understanding of, the Afro-American heritage.
Governing Authority:	Private.
Location:	Downtown Jacksonville, Florida.
Community Served:	The greater Jacksonville area.
Facilities:	Two neighboring buildings that were once a warehouse and a church. The church building houses offices and a day care center; the warehouse building, exhibits, classrooms, a studio, and an auditorium.
Year of Founding:	1969.
Collections:	Traditional African sculpture and works by contemporary black artists.
Education Programs:	In-house and extension programs for children and adults. In addition to programs described in this Chapter, the Center offers day care and other community services.
Education Staff:	Five full-time paid staff members at the Center's Afro Museum. Volunteer and paid staff members working in other areas of the Center also contribute to Museum programs.
Hours:	Weekdays, from 10 a.m. to 6 p.m.
Admission:	Free.
Attendance:	No figures are kept.

For further information, write to Mr. John Farmer, Director, the Afro-American Cultural Development Center, 520 West State Street, Jacksonville, Florida 32202.

THE AFRO-AMERICAN CULTURAL DEVELOPMENT CENTER, INC.

The Afro-American Cultural Development Center, in downtown Jacksonville, Florida, was founded in 1969 for the purpose of preserving and promoting black culture in the Jacksonville area. In the heart of the City's oldest and poorest neighborhood, the Center occupies two neighboring buildings that were once a warehouse and a church.

Exhibits

The Center's Afro Museum is housed on the ground floor of the warehouse. Window paintings tell the story of the black experience and symbolize the philosophies of black leaders from Frederick Douglass to Malcolm X. A layer of white sand covers the floors, and galleries are partitioned off with plywood panels and straw mats. Everywhere, colorful paintings and murals by local artists illustrate the present-day black condition and express political points of view. To demonstrate the worldwide influences of African art, carvings from sub-Saharan Africa are justaposed with carvings and paintings by blacks from New Guinea, Nassau, Haiti, and North America. There is one piece of "found art" -- a chunk of driftwood, about three feet high, that looks like an open hand, the symbol of the Center. The exhibits have no labels and no glass enclosures. Most large sculptures stand on the floor; smaller ones occupy wall niches.

Up a steep, narrow stairway on the building's second floor, are a small auditorium, the studio of the Museum's Artist-in-Residence, and a meeting room hung with paintings and collages. The walls of upstairs rooms are painted in Black Liberation colors.

Programs Given in the Museum

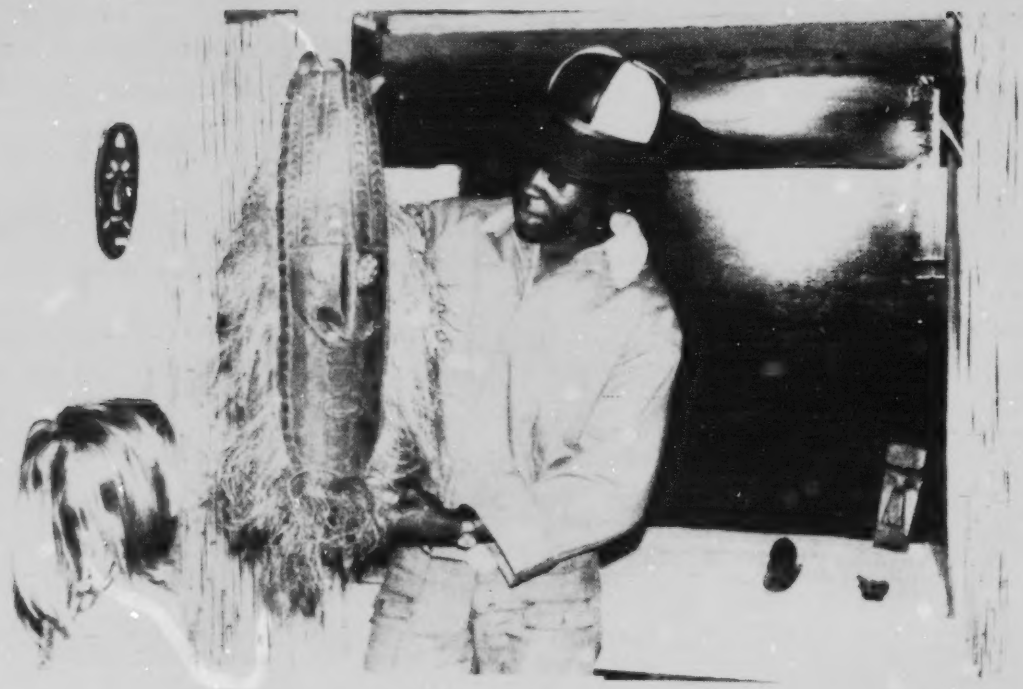
Guided Tours

Monday through Friday, in the morning and the afternoon, busloads of children, black and

white, of kindergarten through high school age, come from schools, churches, and day camps throughout the Jacksonville area to tour the Museum and the rest of the Center. The tours are given free of charge and range in length from one to two-and-a-half hours. Participating groups may include anywhere from thirty to one hundred youngsters. Upon arriving at the Center, groups larger than thirty-five divide in half or in thirds; and each smaller group, accompanied by a guide, begins its tour in a different part of the Museum.

After introducing himself and explaining briefly the purpose of the Museum, the guide teaches the youngsters an African song and invites them to handle pieces of sculpture, to try on carved masks, and to play an African drum. He develops the program's theme of black pride and black achievement by showing the widespread influences of African art and pointing to the Center itself as an example of black accomplishment. Following this half-hour gallery experience, the second floor is visited. There the youngsters meet the Artist-in-Residence, who shows them his studio. Then they discuss with their guide their feelings about the Center and consider ways of applying what they learned earlier in the morning to their personal lives. After practicing two or three phrases in Swahili and viewing several comic skits performed by the staff, they walk to the church building, where they have punch and cookies and see all or part of a musical drama, "Four Hundred Years of Changes."

With a cast of twenty, the drama conveys the Afro-American experience from the horrors of the middle passage to the present. A tragicomedy, with a message of hope, it is performed both at the Center and at schools and churches inside and outside the Jacksonville area. There are three acts, each of which lasts approximately half an hour and can be performed separately. The first act tells of slavery, the second of black migration to the cities, and the third of "that modern yet cruel form of enslavement,"



drug abuse. At the end of the performance, the audience stands, joins hands, and sings "Freedom is a Constant Struggle."

Methods. Although tours and drama group performances are well-rehearsed and often-repeated, they have a feeling of spontaneity. Tours are conversational in style. The guide begins with, "Here are some paintings brothers and sisters did without getting paid. None are perfect, but we're not looking for anyone perfect; we want people to come here and express what they feel." Always he adjusts the level of the program to suit the group, allowing very young children to explore the gallery on their own before listening to him, and giving high school students a more substantive talk than junior high or upper-elementary students. He asks the youngsters to use their imaginations -- to pretend the sandy gallery is an African desert; the stairway to the second floor, an African mountain; and the meeting room, Timbuktu, the center of learning and commerce in sixteenth-century West Africa. Although the theme of the program is serious, humor, both mild and outrageous, is employed throughout. The skits at the end of the warehouse segment of the program are hilarious to children of all ages.

The drama, which has no script and is slightly different at each performance, has tremendous impact because it is true. The first two acts are historically accurate; the third reflects the personal experiences of some of the members of the cast.

Art Festival

An art festival, now an annual event at the Center, was held for the first time in 1971. The 1971 festival lasted three days and featured soul food; a fashion show; and musical, dance, and theatrical performances as well as exhibits of Haitian, traditional African, and Afro-American art and a display of paintings and drawings by black schoolchildren. About three hundred people attended the performance; many more visited the exhibits. Following the festival, a number of

the exhibits were displayed at two suburban shopping centers.

Bi-Racial Workshops and Seminars

Bi-racial workshops and seminars, held at the Center for the purpose of developing racial understanding, have had a long-lasting effect on the Jacksonville community. Begun in March, 1971 with money from the U.S. Office of Education's Emergency School Assistance fund, the seminar-workshop program was developed in several phases.

The first phase involved two seminars lasting three days each. The earlier of the two, attended by 118 parent leaders, teachers, and administrators from recently-desegregated schools, had as its objective the working out of a set of practical recommendations for easing racial tensions in the schools. As a result of the seminar, a resource center called the Jacksonville Council for a Creative Curriculum was developed. Since 1971, the Council has provided Jacksonville schools with films, books, and recordings relevant to the black experience.

The second of the two seminars was attended by 300 people from the schools and the community. The objectives of the program were to help participants acknowledge their feelings of racial prejudice and to find ways in which individuals could work to bring about greater bi-racial understanding. An important part of the seminar was a lecture on black art and black history, illustrated with exhibit materials.

Following the seminars, came two series of workshop "encounters." Each series consisted of three months of bi-weekly meetings and was attended by twelve teenagers and adults. The sessions were led by a clergyman trained in group therapy.

Although the funding period for the seminar-workshop program ended in March of 1972, the Center still holds emergency workshops to deal

with "racial incidents" in the schools. Such incidents, which usually involve destruction of property and sometimes physical violence, occur in Jacksonville several times a month. Usually the students involved go immediately to the Center for help, or a teacher or a principal does so. In response, the Director of the Center visits the school and talks to all parties in an effort to ease the tension, sends the drama group to the school to perform, and invites students and teachers to the Museum for a tour program.

Extension Services

At least once a month, exhibits of traditional and modern works by black artists are loaned free to area high schools and colleges for periods of two weeks or longer. The materials are displayed in library and classroom exhibit cases. At some time during the loan period, the Director of the Center visits the schools and gives an informal lecture lasting anywhere from thirty minutes to two hours. He explains Africa's role in Biblical history, traces the origins of black people living in different parts of the world; demonstrates the global influences he believes African art to have had on Western art from early times to the present, and explains some of the symbolism of traditional pieces. The program ends with a question-and-answer period.

Staff

The staff of the Center includes forty full-time adults, ten part-time students, and a changing number of student and adult volunteers. In addition to the Director of the Center, staff positions include a Director of Youth Development, responsible for organizing bi-racial clubs in 125 Jacksonville high schools; a Cultural Director, in charge of a program through which members of the black community are organized to work for a platform of social reforms; a Director of Recreation; a Director of "Operation Checkpoint,"

whose trained staff offers at the Center and four other locations in the inner city, free day care, recreational, and tutorial services for elementary school children; a Director of the "Saturday School," whose trained volunteers teach reading to children and adults and conduct adult classes in black studies; and a Director of the Afro Museum.

Also, there are two secretaries, who schedule tours, loan exhibits, and drama group engagements, handle correspondence, and occasionally give tours; six Tutors, who work at the day care centers; and two Writers, one Artist-in-Residence, and two Tour Guides, who work at the Museum.

The Director of the Museum is seventeen and has been with the Center since 1969, when the entire staff was volunteer. He is responsible for the tour program, for exhibits, and for the general operation of the Museum. The Artist-in-Residence, who is twenty, also has been with the Center since its beginning. In addition to working for the Museum, he lends his services to the community for political and other causes. The writers, a young man and a young woman, compose poems for the Drama group, write program guides and brochures, and give writing instruction to young people from the community.

Nearly everyone on the regular staff is in his late teens or early twenties. A few members are college graduates; a number have had some college; and some have had experience in church and community work. All receive on-the-job training. Those who give tours go through an apprentice period, during which they watch experienced guides in action, read recommended books on African and Afro-American art and culture, and practice giving tours to fellow staff members. The length of the apprenticeships is anywhere from a month to six weeks, depending on the individual.

The Drama Group is made up of twenty volunteers, aged fourteen to twenty-two, half of whom

are regular staff members and half of whom are students. The group has no director, and decisions are made by consensus. Rehearsals, which generally last two hours, are held two evenings a week and on Sunday afternoons.

The student staff works in Jacksonville high schools to encourage black leadership and to promote programs sponsored by the Center. The students are selected on the basis of scholastic achievement and leadership potential and are paid $1.60 an hour for working three hours a day, five days a week.

Working hours at the Center are irregular; and no one is required to answer for his time. Many of the staff work nine or ten hours a day; some, longer.

The Center has a Community Advisory Board of thirteen professional people and community leaders. Six board members are white and seven black. The board gives legal and financial advice and provides an outsider's point of view helpful to the staff in making policy decisions.

Funding

The Center's operating budget for 1972 was $160,000. Of this amount, $108,000 came from the U.S. Office of Education's Emergency School Assistance Fund, which gives money to school districts and community organizations for programs encouraging bi-racial community involvement in the implementation of area school desegregation plans. Programs led by the Cultural Director, the Director of "Operation Checkpoint," the Director of the Saturday School, and the Director of Youth Development were supported by the grant. In 1971, a smaller grant from the same source funded the Seminar Workshop Program.

Money for the Museum and the Drama Group program comes from the Presbyterian Church, which pays the salary of one staff member; from

small contributions from individuals and local businesses; and from gift shop profits.

When the Center was first established, there was only enough money to pay the rent on the warehouse. The Director and five teenage volunteers cleared the building, which was piled ceiling-high with old furniture, and created the Museum. Other Center activities grew out of the Museum.

Coordination with Schools

Museum Programs and the School Curriculum

In addition to offering the only instruction in black art and black culture widely available to Jacksonville students, the Center encourages the teaching of black studies in the classroom. Teachers rely on the Center for advice about resource materials, lesson content, and techniques of presentation.

Informing Teachers

At the beginning of the school year, letters announcing the tour program are sent to the office of every public school in the Jacksonville area. During the year, letters and telephone calls publicize specific events.

In 1971, many teachers and school administrators became acquainted with the Center through the seminar workshop program; and currently, many more are learning of it through youth clubs organized in city high schools by the Director of Youth Development. In the beginning, teachers and other adults in the schools were afraid that exposing students to a place decorated in Black Liberation colors and called "Afro Center" would heighten, rather than reduce, racial tensions; and black teachers feared that association with the Center would cost them their jobs. The Center has gradually gained the acceptance among teachers and school administrators that it enjoyed from

the beginning among students. This change of attitude is due, in part, to the Center's close association with area churches and, in part, to the Afro Museum, which the community views as a sign of middle class respectability.

Facilities

In addition to the studio of the Artist-in-Residence and the meeting room, the second floor of the warehouse contains a small auditorium furnished with seats from an old movie theatre. The building's third floor, which presently is empty, has been set aside as a recreation area, where eventually there will be table games. The building is unheated.

The church building contains offices and day care facilities and a room seating two hundred, where drama performances are given.

Because Jacksonville schools have few buses available for field trips, the Center has bought three second-hand buses, used by the staff for bringing classes to and from tour programs.

Publications

Brochures -- three four-page, illustrated leaflets, the first describing the Center as a whole; the second, the drama program; and the third, the Youth Development program.

Drama Program -- a brochure giving a synopsis of the Drama, a list of members of the cast, and a brief description of the Youth Development program. The publication is distributed at drama performances.

THE MILWAUKEE PUBLIC MUSEUM

Purpose:	To increase public understanding of the interrelationships between nature and man.
Governing Authority:	Municipal.
Location:	Downtown Milwaukee.
Community Served:	The City of Milwaukee and outlying areas.
Year of Founding:	1882.
Facility:	An eight-story building, completed in 1963, which houses an auditorium, offices, a museum store, an Audiovisual Center, and a Youth Center in addition to exhibits.
Collections:	History, anthropology, and the natural sciences.
Education Programs:	In-house and extension programs for children and adults are offered through an Education Division.
Education Staff:	Twenty-two full-time paid staff members, three part-time paid student aides, and approximately thirty-five volunteer docents.
Hours:	From 9 a.m. to 5 p.m. daily.
Admission:	Free for Milwaukee city residents; for non-residents, $1 for adults and 25¢ for children.
Attendance:	Approximately 841,875 visitors a year.

For further information, write to Miss Edith Quade, Director of Education, Milwaukee Public Museum, Milwaukee, Wisconsin 53233.

THE MILWAUKEE PUBLIC MUSEUM

The Milwaukee Public Museum, founded as a municipal institution in 1882, began in the 1840's with the establishment of a teaching collection of natural history specimens in the German English Academy of a Milwaukee schoolmaster. Now the fourth largest natural history museum in the United States and occupying an eight-story building in downtown Milwaukee, the Museum is dedicated to increasing public understanding of the interrelationships between man and nature. By juxtaposing exhibit materials from the fields of history, natural science, and anthropology, Museum galleries cut across traditional boundaries to convey broad themes.

Exhibits

First floor exhibits take you on a "Trip Through Time," a journey that gives a sweeping view of the history of the earth from the beginning of geologic time to the early twentieth century. The trip begins in the Museum's East Wing, proceeding past milleniums of fossils, through the Paleozoic, the Mesozoic, and the Cenozoic eras to the Old Stone Age, where lighted exhibits in a darkened cave trace man's early physical and cultural development. Upon leaving the cave, you visit the world's early civilizations, with stops at an Egyptian tomb; the tiled gates of a city in Mesopotamia; an exhibit of Greek pottery; and a Pompeiian villa, before winding down a corridor, through a striped pavillion to the Middle Ages, where there are exhibits of weapons and armor and a diorama of a Hanseatic counting house.

Across a lobby, in the Museum's West Wing, the trip continues in the New World, with exhibits telling of the history and pre-history of Wisconsin. You pass an assemblage of fossil bison bones, a geologic map and time chart, a series of Colonial period rooms, and dioramas of early Milwaukee. The journey ends in the "Streets of Old Milwaukee," where cedar-block and granite-block pavements and actual-sized replicas of a hotel, a sausage shop, a general store, and other buildings convey the feeling of being in the City at the turn of the century.

Galleries on the second and third floors combine to provide a "geographical-cultural-environmental tour of the world," which makes apparent the natural history of regions visited through exhibits depicting plant and animal wildlife and the cultures of native peoples. Sound effects heighten the realism of the experience in a number of the regions.

A Youth Center, on the ground floor, houses a "Living World" exhibit of plants and small live animals, an Activity Area containing a Chippewa Indian wigwam and audiovisual materials used in school and workshop programs, a science laboratory, a rustic Trading Post, and a one-room Period House. The Period House, which may be converted to a number of eras, is presently a pioneer cabin furnished with rag rugs, a woodburning stove and a complement of authentic period pieces.

Programs Given in the Museum

Curriculum-Coordinated Lessons

On weekdays during the school year, groups of fourth, fifth, sixth, and seventh graders take part in museum lessons coordinated to the curricula of Milwaukee public and parochial schools. Each lesson lasts about an hour and a half, begins with a film, and has three segments or "stops," which include a "demonstration" in the Youth Center, during which children may handle and use exhibit materials, and visits to appropriate exhibits in upstairs or Youth Center galleries. Approximately 26,000 children participate annually. Two of seven lessons offered are described here.

A Day in Pioneer Wisconsin. "A Day in Pioneer Wisconsin," a lesson for fourth-graders, gives a realistic idea of life during the State's pioneer era, the period between 1820 and 1880. The lesson begins with a thirty-minute film showing how half a century of technological changes affected the lives of residents in a pioneer village. After the film, students visit the Period House.

There they compare life today with life in pioneer times as their instructor talks about the everyday pleasures and hardships encountered on the Wisconsin frontier. He describes, among other realities, the Saturday night bath, while climbing into a tin bathtub to show how a person would fit; sleeping conditions, while rustling the corn husk mattress of a bed; and cooking practices, while demonstrating the uses of the stove and a coffee grinder. When he has finished talking, he invites volunteers to sit in the tub, work the coffee grinder, and use other artifacts.

From the Period House, students proceed to the Activity Area for an informal fifteen-minute slide lecture about the role of transportation in the development of Wisconsin's early industries, and from the Activity Area, to the Science Laboratory, where they pretend to be pioneer children taking part in a typical school day.

For the academic experience, the Laboratory has been made to look like a schoolroom, with ink wells and quill pens set out on its long, low tables and a "school marm" mannequin standing up front. The instructor rings a bell to call the class to order, passes out souvenir pamphlets called "brochures" (to be described), and suggests that the children write their names on the pamphlets with the quill pens. After they have done so, with much scratching and concentration, he discusses briefly a typical school day, distributes slate boards, and asks several students to take turns reading aloud problems for the class to solve from the period primer, Progressive Intellectual Arithmetic. When problems have been solved and slates erased and collected, he ends the morning with a lesson in old-fashioned soap making, describing the steps of the process at a wooden soap leacher that stands in the front of the room.

"Milwaukee and You." "Milwaukee and You," a lesson for fifth graders, is intended to lead students to "responsible citizenship" by increasing their awareness and understanding of the urban environment.[1]

1. "Museum Field Trip Guide, Milwaukee and You." p. 3.

In the Period House, a fourth-grader tries the size of an old-fashioned bathtub.

Students solve problems from the period primer, Progressive Intellectual Arithmetic.

After seeing a short film about Milwaukee's history and present-day environmental condition, students visit "New World" exhibits on the Museum's first floor. There they compare motion picture sequences of aerial photographs of the City today with dioramas depicting the early stages of its past from the mid 1600's, when it was unsettled, to 1822, when it was an established fur trading post. Then, in the "Streets of Old Milwaukee," they sit on the sidewalk and listen to a tape recording that combines turn-of-the-century city sounds (the clopping of horses, the chugging of an automobile, the music of a gramophone, the click of feet on a wooden pavement) with a narration explaining how accelerations in technological development and population growth have affected environmental conditions over the past seventy years.

Following the tape, the youngsters proceed to the Activity Area of the Youth Center for a "demonstration" about plant and animal wildlife in the City -- a talk designed to introduce city children to the fun of exploring the natural world in an urban environment. For illustrations, the instructor uses a table-top replica of a vacant lot, a small-scale model of a city house, and an eight-foot model tree. The lot has tall grass at one end and a baseball diamond at the other. In the grass, are a bird's nest and animal specimens. The house is cut away to show where various household insects live. In addition to insects, it harbors two other non-domestic animals -- a bat in the attic and a rat outside in the garbage can. The tree, which is actually half a tree and sits flat against the wall, has three hinged doors, behind which are specimens of some of the animals that frequent city trees.

Methods. The "stops" of curriculum-coordinated lessons can be made in any order, allowing each of three instructors to work with up to forty students at a time. After the introductory film, an entire group of students (maximum size, 120) is divided into thirds; and each third begins the lesson at a different stop. During "A Day in Pioneer Wisconsin," one group begins in the Period House, another in the Science Laboratory, and a third in the Activity Area. The groups rotate at twenty-minute intervals so that by the end of a lesson, each has participated in all three "stops."

Before proceeding to a new "stop," an instructor always announces to his group where he is headed and why. During a recent presentation of "A Day in Pioneer Wisconsin," one instructor prefaced his students' visit to the schoolroom with, "Now we're going to a new area to talk about some things very dear to people your age -- school and soap," and their visit to the Period House with "Now we'll go to a house of 135 years ago so that you can compare your house today with what houses were like then."

During demonstrations, instructors keep objects to be presented hidden from view until the moment to talk about them so that students' attention will not be distracted from the subject at hand. Often the objects are hidden in ingenious ways as in the demonstration segment of "Milwaukee and You," when they are kept behind the door of the model tree and the fence surrounding the table top lot.

Through all lessons runs the theme of man's relationship to his environment; and although instructors do not preach, they do express often their concern about the effect of modern man's carelessness on present and future conditions. In "A Day in Pioneer Wisconsin," as they compare pioneer ways with ours today, they point out that unlike us, pioneers did not throw things away -- that they made rugs from rags and soap from cooking grease, and used slate boards instead of paper for writing on. And "A City is to Live In," the staff-produced film introducing "Milwaukee and You," ends with the following:

> Would it matter if all of the blue of water...turned brown...and each bulging-eyed marvel was drowned?
>
> And what if the sun came out... but something stopped its shining?
>
> A city is everyone together... and a city should be a plan. Of how big it can grow...and what it should build...where it can go...what it should use...and how it can save.

A city is you...and me... and everyone around us. But would it matter if... some of us cared, but more of us didn't?

Guided Tours

On weekdays throughout the year, staff instructors and volunteer docents give pre-arranged guided tours on a variety of subjects to class-sized groups of children and adults. The tours are free to City residents; for non-residents, there is a $10 charge for guide services in addition to a regular admission fee. In 1970, tour participants numbered 2,094.

A "Homes Around the World" tour for second and third graders, visits a selection of full-sized model dwellings. From the Ice Age "cave" on the Museum's first floor, children proceed to a tipi, a pueblo, a plankhouse, and other American Indian houses on the second; and then to an igloo and Chinese, Japanese, and Latin American houses on the third, with their guide describing briefly at each stop, the way of life of the people represented. In the igloo, where an Arctic "wind" howls outside, the youngsters sit on the floor and discuss man's ability to adjust to his environment. The docent who developed the tour attributes its considerable popularity largely to its whirlwind quality.

Orientation Programs

During April and May (months of peak visitation), weekday Orientation Programs are given by docents and instructors to groups of children and adults. Each program consists of a fourteen-minute taped slide lecture and a question-and-answer period. Slides tell the visitor where to look and how an exhibit is constructed and present rules for proper museum behavior. Following the orientation, participating groups are led to an appropriate starting point from which they embark on self-guided tours of the exhibits. In 1970, orientation participants numbered 15,442. Staff members feel that the program has been responsible for a noticeable improvement in young guests' behavior.

Informal Programs

Workshops. Workshops in history, anthropology, and the natural sciences are offered to children aged nine to thirteen on weekdays in the summer and on Saturdays during the school year. Each workshop costs between three and five dollars, consists of three two-hour sessions, and has a maximum enrollment of twenty. All relate in some way to Museum exhibits.

In a recent summer workshop, "Old Time Chores," children worked with Museum artifacts to grind corn, split wood, make soap and ice cream, and carry out a number of other chores. They also visited a farm, where they used old farming implements. By participating in the activities and studying museum exhibits illustrative of life patterns before 1900, the youngsters could make direct comparisons between chores of yesterday and chores of today and environmental conditions then and now. Thus they gained a better understanding of everyday life before the turn of the century and an increased awareness of today's environmental problems.

The Trading Post. On the first Saturday of every month during the school year, several hundred youngsters aged eight to sixteen visit the Trading Post in the Museum's Youth Center to trade shells, fossils, insect specimens, stamps, books and other treasures. The Post is run by a "Chief Trader" from the Education Division for the purpose of giving children the opportunity to build collections related to the Museum's fields of study. Paper money, worth a varying number of "points," is used as the exchange medium. Trading Post attendance in 1970 was 2,379.

Film Programs. Twice a year, the Education Division presents a free Saturday Film Festival for children; and on Saturday and Sunday afternoons from October to March, the Division offers film lectures on a variety of subjects to mixed audiences of children and adults.

Extension Services

Lecture Programs

Throughout the year, the staff of the Education Division gives, upon request, free lectures in the community to groups of children and adults. In 1970, lecture attendance was 2,387.

In the summer of 1972, a staff instructor gave five forty-five minute talks on Plains and Woodland Indians to young members of branch city library "Bookworm Clubs." For each program, she wore an Iroquois costume and presented examples of tools, clothing, and musical instruments representative of the Plains and the Woodland cultures. To dramatize the differences between the two groups, she dressed two volunteers in the traditional dress of each. At the end of the talk, the children took turns handling and examining the artifacts.

The Loan of Audiovisual Aides

The Museum houses a large collection of audio-visual materials, which it loans free to public, private, and parochial schools in the city of Milwaukee and, for a fee, to clubs, organizations, and individuals who pay an annual registration fee. The materials relate to twenty-four subject areas and include more than 17,000 films, 12,000 slides, 5,000 filmstrips, and 1,350 portable, three-dimensional exhibits. In 1970, they were loaned 136,634 times, reaching 8,385,139 children and adults.

The Milwaukee Public School system deposits approximately half of the inventory of the collection's films for storage, maintenance, and circulation by the Education Division's Audiovisual Center. These films are loaned only to public schools. The remaining, which are Museum owned, are circulated to all schools in the city.

In a catalog kept in every school and public library in the city, loan materials are listed under their subject headings and keyed as to type and general age level. Most films and filmstrips are commercially made; slide collections and three-dimensional exhibits are either prepared at the Museum or bought ready-made from commercial suppliers.

Portable Exhibits. The collection's portable exhibits are of two types: those contained in sealed display cases and those contained in hampers that can be opened. The former include animal specimens, miniature dioramas, models of historic figures, and "enclosed" artifact collections; the latter, "open case exhibits" of sturdy replaceable objects meant to be handled, used, and sometimes worn. There are forty-three open case exhibits, each containing a collection of objects representing an area of the world, a period of history, or, as in the instance of a "Community Helpers" series being developed for the primary grades, an occupation.

Education Staff

The Education Division is made up of two sections, which together are supervised by a Director of Education. The first section has a staff of four "educators" (referred to also in this Chapter as instructors), one secretary to the Director of Education, and three part-time student aides, as well as thirty-five volunteer docents. This staff is responsible for all programs given in the museum and for lectures in the community. The other Section, the Audiovisual Center, develops and maintains audio-visual loan materials and coordinates their lending. The Center is staffed by a Director, an Assistant to the Director, an artist, eight technicians, and five booking clerks.

Paid Staff

The Director of Education is charged with the indirect supervision of the Audiovisual Center and the direct supervision of the Division's other section. She has a Bachelor's degree in biology, has done graduate work in education, and has been with the Museum since 1941, serving first as an Assistant Educator and later as an Associate Educator before becoming Director of Education in 1959. She recruits Division personnel, trains educators, oversees the development of school programs, plans and arranges "Discovery and Travel Programs," and gives orientations for teachers.

The Division's Educators are either "associates" or "assistants," the former ranking higher than the latter. Presently there are three Educators -- two Associates and one Assistant -- and an opening for one more. While all Educators share certain basic duties in that all participate in the development and the teaching of curriculum-coordinated, guided tour, workshop, and lecture programs, each specializes in a preferred subject area and has duties additional to those shared with other Educators.

One of the Associate Educators is a writer with an undergraduate degree and some graduate work in anthropology; the other, a former junior high school teacher with an undergraduate degree in geography and graduate work in anthropology. The Assistant Educator, a biologist, has an undergraduate degree in secondary education.

The Director of the Audiovisual Center, a former university teacher of primary studies and audio-visual aids, has a Bachelor's degree in general science and a Master's degree in education. In addition to supervising the Center, she works with staff members and school groups to select and purchase new materials; conducts orientation sessions for teachers; and plans and schedules special film programs for children and adults.

Three part-time student aides from a nearby University are assigned to the Division each year. Aides work with educators, helping to teach workshops and orientation programs, set up exhibits, run the Trading Post, and occasionally conduct tours and curriculum-coordinated programs.

Docents

The Division's thirty-five volunteer docents give guided tours and orientation programs. They were recruited in 1969 from the ranks of MUSES, an organization of volunteer women working in a number of areas of the Museum. The docents were organized and their training planned and supervised by the woman who is now their chairman. Their first and second years were spent in training.

Between October and May of their first year, they spent one morning a month visiting the Museum's various divisions, becoming acquainted with staff members and touring behind the scenes. During their second year, each wrote a short paper on a subject dealt with in an exhibit area and observed regularly the education staff teaching curriculum-coordinated lessons.[2] A few gave guided tours. During this their third year, they have been giving an increasing number of tours as well as orientation programs and continue to observe regularly the teaching of curriculum-coordinated lessons.

Funding

The Museum is supported by the City of Milwaukee. In 1972, it received from the City $1,500,000 for basic expenses and $175,000 for capital improvements. Each year it receives, in addition to City funds, certain "enrichment money" from corporations and individuals, much of which is raised by the auxiliary, "Friends of the Museum."

Approximately $422,526 is set aside each year for education programs. This amount is based on recommendations made by the Director of Education and covers all expenses of the Division, including those of the Audio-visual Center.

Coordination With Schools

Museum Programs and the School Curriculum

Curriculum-coordinated lessons for fourth, fifth, sixth, and seventh graders relate to specific classroom units taught in Milwaukee public, Lutheran and Catholic schools. Of the lessons described previously, "A Day in Pioneer Wisconsin" relates to a Wisconsin history unit on "pioneer life" taught at the fourth grade level in both public and parochial schools, and "Milwaukee and You" to a fifth grade public school unit on the urban environment.

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2. After the reports were checked for accuracy by curators, they were duplicated and compiled in loose-leaf notebooks; and a note book was given to each woman to use as a reference.

In planning a new curriculum-coordinated lesson, Museum instructors and the Director of Education study curriculum guides currently in use in Milwaukee public schools and, with the curriculum in mind, outline five or six tentative programs. Then the Director of Education consults with school curriculum specialists for advice as to which program of those outlined teachers would prefer. After the staff has developed the preferred lesson (usually with one staff member working on each of its "stops"), they offer it on a trial basis the next school year. Then they revise it, if necessary, before offering it again the following year. Most successful lessons run for three or more years, with up-dating when needed.

Each summer the Director of Education sets up a schedule for lessons for the coming year, timing each lesson so that it will be offered at or near the time its corresponding classroom unit is taught in the public schools and reserving all morning appointments and a number of afternoons for the public schools. Then she discusses the schedule with parochial school curriculum specialists to determine which lessons their teachers can use and when and sets aside an appropriate number of afternoon appointments for parochial classes. Since the curricula of Lutheran and Catholic schools are in some instances similar both to one another and to the public school curriculum, a number of the lessons offered each year pertain to all three.

Informing Teachers

Teachers are informed of Museum offerings through orientation programs for teachers and student teachers, program announcements sent in batches of twelve at the beginning of the school year to all public elementary schools in the city (each mailing is addressed to the attention of the school principal and to that of the teachers of the grades for whom the programs are offered), and program calendars sent to special program coordinators in the parochial and the public schools.

Scheduling of Lessons and Guided Tours

Teachers make reservations for curriculum-coordinated lessons and guided tours by telephoning the Division's Secretary a week or more in advance. About two weeks before a teacher is scheduled to arrive for a lesson, the Secretary sends her a Teacher's Guide and a confirmation card. To all teachers who have reserved guided tours, she sends a confirmation sheet which contains rules for museum conduct as well as information about the time of the tour, etc.

Groups coming to the Museum for self-guided tours need no formal reservations but are asked to make an appointment a week or more in advance. Upon doing so, they are sent "Group Information Sheets" which outline rules for Museum behavior, describe the facility, and make recommendations as to group size (no more than one hundred students from a single school, mornings or afternoons), length of visit (no longer than an hour and a half), and number of chaperones (one for every ten children). A teacher notifying the Division of an intended self-guided visit to take place in April or May is told about the Orientation Program offered at that time.

Scheduling and Distribution of Loan Materials

Teachers wanting to borrow audiovisual aids complete order blanks, which they send to the Museum's Audiovisual Center. From the Center, the orders go in batches to Milwaukee's City Hall, where a computer determines the availability of requested materials and sets the delivery dates for them.

Trucks owned and operated by the Milwaukee Public School System deliver audiovisual materials to public and parochial schools, the Museum paying the public schools for services to parochial schools. After the materials have been in the classrooms for a week, they are picked up by the school trucks and delivered to the Museum, where they are inspected and, if necessary, repaired before being sent out again. This system of computerized booking and school-operated delivery was begun in 1971. Before that time, booking was done at the Center; and materials were delivered and picked up by trucks owned and operated by the Museum. Because of frequent computer errors, the Center has found adjustment to the new system difficult.

Facilities

The Youth Center

A Science Laboratory holds up to forty children and is used for all kinds of messy projects, scientific and otherwise. It is furnished with tables and chairs, sinks, aquariums, maps, and storage cabinets.

An Activity Area is closed off from the rest of the Center by folding doors and may be converted to one room or two. Furnishings there include storage cabinets, chairs to seat forty, and a case for exhibit materials.

Portable rear screen projection units, screens, tables, and stands are used with audio-visual equipment in the laboratory, the Activity Area, and the exhibit halls.

A large storage closet, which has a doorway high and wide enough to accommodate flats and other large objects, is next to the Activity Area. A storeroom with shelves for equipment and materials; an "editing room" housing cameras and film editing and projection equipment; and a cloakroom occupy other parts of the Center.

Publications

Visual Aids Catalog -- a 394-page catalog, which lists under twenty-four subject headings the audio-visual materials loaned through the Museum's Audio-visual Center and keys the listings as to type and level. Revised every two years by the Assistant to the Director of the Center, the catalog is used by teachers and other borrowers. Copies are kept in City school and public libraries.

Film Catalog -- a 104-page catalog listing under twenty-seven subject headings the films loaned through the Audiovisual Center. Each listing has information about the film's content, length, level, and producer. The catalog is revised every two years. Copies are kept in school and public libraries.

Museum Field Guides -- five-page teacher's guides outlining the content of curriculum-coordinated lessons and offering suggestions for preparatory and follow-up activities. Each guide (there is one for each lesson) is in outline form, devoting about one page to activity suggestions, three to lesson content, and one to procedural instructions for arranging a Museum visit.

Your Keys to the New Museum -- a series of four-page leaflets prepared by the Education Division. There is one leaflet or "key" containing a map and a written explanation of exhibits for each of the Museum's major exhibit areas. The publications are sold for a penny a piece from self-service receptacles. Until recently, before the cost of doing so became prohibitive, the keys were sent to all persons making appointments for self-guided tours.

Your Keys to the New Museum

(No. 1)

Here is the key to secrets of early Wisconsin exploration and settlement in our New Museum!

The French explorers, traders and missionaries began our written history. Thus, as you enter the first floor, west wing, of the New Museum, you find yourself among objects and dioramas showing the period of French influence (exhibits 1, 2, 3 and 7 on the floor plan, next page). You can watch firearms being demonstrated to the Indians as you stand on the bank of a Wisconsin stream (3).

The second chapter of written Wisconsin history belongs to the British. At the end of the French and Indian War, the British were the rulers of this area. The British ship "Felicity" visited Milwaukee in November, 1779 (6). Although the Revolutionary War was won by the American Colonies, the British influence continued for many years.

The French and British did not appear in Wisconsin out of nowhere. Large wall maps present the story of the early explorers and settlers in the New World (8). When the explorers did appear in Wisconsin, the Indians, and the land itself, were already here. A smaller hall, opening off to the right near the maps, tells about the land and the people of prehistoric Wisconsin (10 - 13).

Leaving this hall, we again pick up Wisconsin written history. Milwaukee's beginnings start with Juneau's trading post (9). Farmers and miners followed Juneau into the territory building cabins from the trees of the area (16, 19). By the time of the Civil War, there were fine homes, many industries and well developed agriculture in Wisconsin (14, 17, 20). Wisconsin furnished many soldiers for the Union Army. At the end of the war these soldiers returned to a city and state which were growing into the gay and lively "90s" still to come.

R. R.

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THE MINNESOTA HISTORICAL SOCIETY

Purpose:	To collect, to preserve, and to interpret the history of Minnesota.
Governing Authority:	Semi-state.
Location:	Headquarters in St. Paul, twenty historic sites elsewhere in the State.
Community Served:	The State of Minnesota.
Facility:	A headquarters building, built in 1917, houses a library and offices as well as exhibits. The Society has additional facilities at a number of other locations.
Year of Founding:	1849.
Collections:	Minnesota history and prehistory.
Education Programs:	In-house and extension programs for children and adults are offered through an Educational Services Department. Besides the programs described here, the Society offers interpretive programs at a number of historic sites.
Education Staff:	Seven full-time staff members and twelve part-time paid guides.
Hours:	8:30 a.m. to 5 p.m. on weekdays, 10 a.m. to 4 p.m. on Saturday, and 2 p.m. to 5 p.m. on Sunday.
Admission:	Free.
Attendance:	750,000 visitors to museum and sites in 1971-72.

For further information, write to Miss Viki Sand, Director of Educational Services, the Minnesota Historical Society, St. Paul, Minnesota 55101

THE MINNESOTA HISTORICAL SOCIETY

The Minnesota Historical Society, the oldest institution in its state, operates a museum and offices in downtown St. Paul, and twenty historic sites at other locations. The Historical Society Museum, where in-house programs described in this chapter take place, occupies a three-story granite structure that stands on a hill across the street from the State Capitol Building.

Exhibits

Upon entering the Museum, the visitor encounters panel displays directing him to exhibits, on ground, second, and third floors. Proceeding directly to main exhibits, on the third floor, he finds a "Fire-fighting Gallery," where he may don a slicker and hat and climb aboard a period fire engine; a "Communications Gallery" displaying early radios, "talking" telephones of several vintages, and other instruments of communication; and a "Chautauqua Room," where classes of school children come for Museum lessons.

Exhibits in the Chautauqua Room are designed to be used and handled. A weathered trading post, that may be entered, has shelves stocked with blankets, traps, chewing tobacco, snowshoes, and other items used by Minnesota's early traders and explorers. An "Indian Cultures" exhibit offers a stone mortar and pestle held in a wooden crib with a supply of dried corn for grinding; and a "Settlement in Minnesota" exhibit has a butter churn, a water pump, and a wooden plow. The displays are augmented by panels of drawings and old photographs. Exhibit labels are written at an upper elementary reading level:

> The early Indians learned that they could live more successfully if they joined together in bands. By doing so, they could more easily hunt, gather food, make clothing, and conquer their enemies. They set up shelters on riverbanks and lake shores, forming villages. Bands drew together into tribes that developed their own customs and ways of life.

Programs Given in the Museum

Museum Lessons

On weekdays in the Chautauqua Room, a staff instructor gives forty-five minute "Museum Lessons" to elementary and secondary school classes and other groups of young people. Group size for each program is limited to fifty. In 1971-72, total attendance was 17,834. Each lesson consists of an informal, half-hour, illustrated lecture, followed by a free period. The objectives of the program are to stimulate an interest in history and in museums and to give a realistic understanding of the topics presented.

"Fur Trade and Exploration," one of five lessons for elementary students, conveys the flavor of Minnesota's "Fur Trade Period," an era lasting from the early 1600's to about 1850. The instructor explains how French explorers established the fur trade in the Great Lakes region and passes around beads, glass bottles, and other trade goods for the children to handle. With a flourish, to emphasize the importance of guns to the trade, she fires a flintlock pistol loaded with powder. Then she introduces the heroes of the lesson, French Canadian adventurers called voyageurs, who transported furs and other goods through the wilderness from posts in Canada to Grand Portage, Minnesota. After dressing a student in a cape and a feathered hat of the kind characteristically worn by the men, she shows slides of paintings giving a seasonal account of voyageur activity. Finally, the youngsters spend about ten minutes rummaging through the Trading Post. As they leave the Chautauqua Room, they are given packets of trade beads as souvenirs of their visit.

"Moments of the Twentieth Century," one of two lessons for high school students, presents a decade-by-decade account of national events as seen through the eyes of Minnesotans living during the occurrences. A twenty-minute taped slide show is followed by a discussion of what life will be like twenty-five years from now. At the end of the program, students try on period shoes and hats and read newspaper accounts of events pictured in the slides. Topics covered include World War I and the effect of anti-German feeling on Minnesota's large German population;

Firing the flintlock pistol

Prohibition, represented by photographs of Minnesota bootleggers; the Depression; and Eugene McCarthy's 1968 campaign for the presidency.

Methods. The instructor chats with students at the start of each lesson in order to establish rapport. During the program, she does little talking, relying on artifacts, slides, and other audiovisual materials to arouse curiosity and stimulate discussion. Often, to illustrate a point, she asks the youngsters to compare two objects or two sets of objects. During the Fur Trade and Exploration lesson, for example, she has the children weigh the efficiency of a clay pot used by the Indians for preparing food with that of an iron kettle used by the explorers for the same purpose so that the youngsters can better understand why the Indians were willing to trade furs for cooking utensils.

Extension Services

Capitol Tours

Throughout the year, college students trained by the Historical Society give tours of the State Capitol Building, which is an Italian Renaissance structure containing a wealth of paintings, statues, and murals pertaining to Minnesota history. In 1971-72, there were 97,631 tour participants, most of whom were schoolchildren. The programs are of two types: "general" and "government."

The General Tour, given the more frequently of the two, visits the building's rotunda and Governor's Reception Room; its senate, house, and supreme court chambers; and its dome, from which you can see most of Minneapolis-St.Paul. The objectives of the program are three: to increase appreciation of the building's architecture and art, to present the building in a historical context, and to illustrate the workings of state government.

When working with children, the guides concentrate on sparking an interest in government and on helping the youngsters, who often are overwhelmed by the building, to feel at home. They try to be as concrete as possible. Instead of attempting to describe voting

procedures in the House of Representatives, for example, they often stage mock sessions, during which students vote on self-proposed bills. Also they frequently urge the youngsters to aspire to political office; one young woman often makes the point that women have a place in public life by inviting little girls into the Supreme Court Chamber to sit in the judges chairs.

Rules for behavior are set at the beginning of each tour. The guide explains when she meets her group why certain limits must be maintained. For the remainder of the program, in order not to destroy her rapport with the children, she relies as much as possible on teachers and chaperones to maintain discipline. Because the floors of the Capitol are hard and tours involve much walking and climbing, youngsters are given the chance to sit down twice during the programs.

Published Materials Sold to Schools

An important part of the Society's education program is the production of supplementary resource materials used in the classroom teaching of Minnesota history and government. The reason for this emphasis is that available school textbooks on these subjects generally are considered inadequate, especially in their treatment of ethnic minorities.

Curriculum Resource Units. In 1971, the Society began, as a longterm project, the development of a series of Curriculum Resource Units, each of which will treat a single aspect of State history. The first unit, now under production, will deal with the history and culture of Minnesota's major Indian tribe, the Ojibwe (Chippewa).

The Ojibwe settled in early times in the Great Lakes region of the United States and Canada and gradually were forced onto reservations, where about half of the Ojibwe in Minnesota live today. Their school drop-out rate of close to 60 percent is one of the highest in the nation. The Historical Society hopes to keep the Ojibwe student in school by providing resource materials of interest and relevance to him. The Society also hopes that the project will increase the non-Indian's understanding of the Ojibwe experience.

A committee of Indian scholars, educators, and community leaders, organized by the American Indian Studies Department of the University of Minnesota, is determining the focus and content of the unit. The committee meets every two or three weeks with Society staff members to review the package at each stage of development.

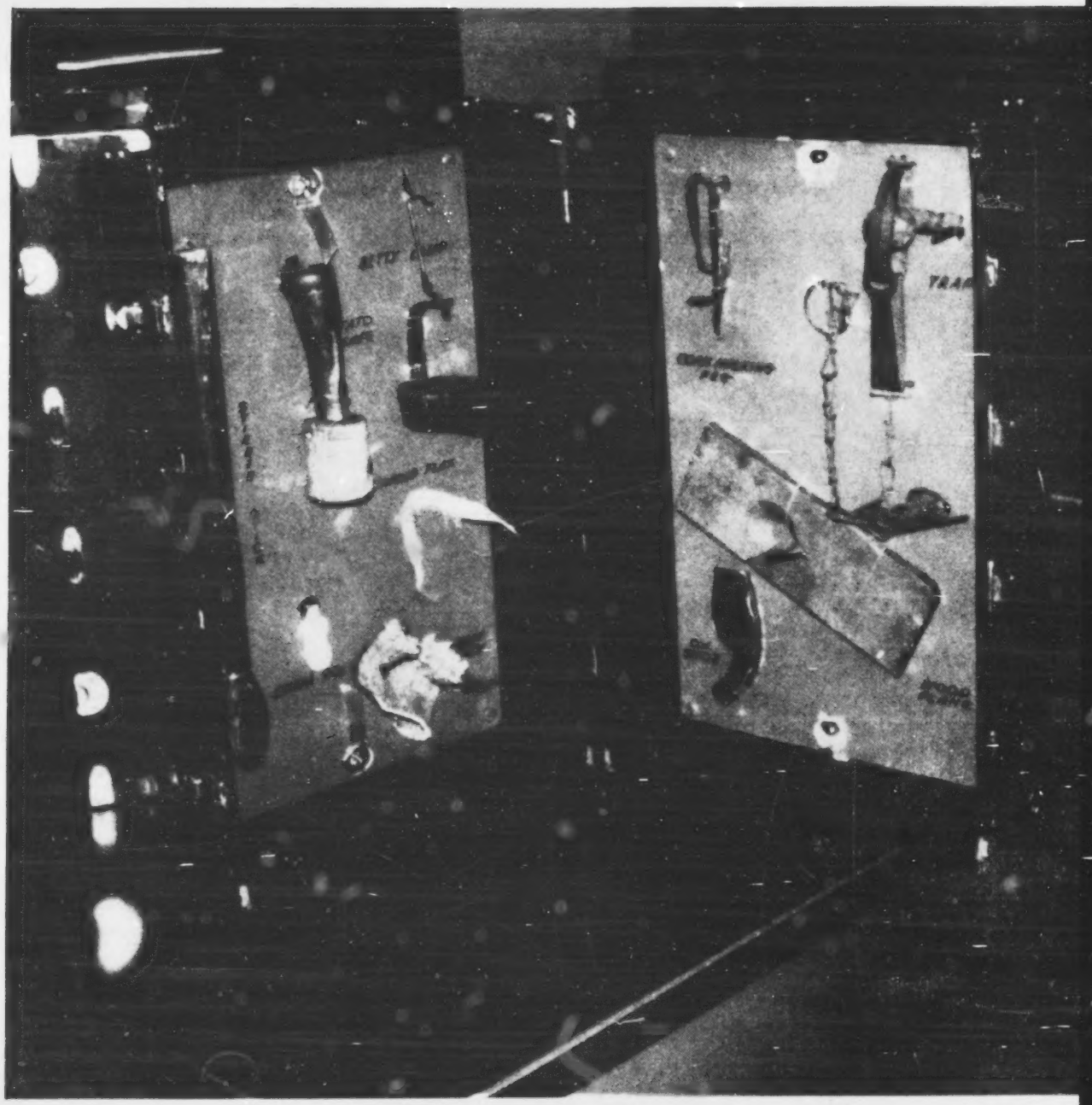
The unit will have an elementary and a secondary version. In each, general background information in the form of teacher's guides and illustrated booklets will be supplemented with filmstrips and other audio-visual materials treating specific aspects of the subject in detail. Photostats of treaties and other documents will be included to give students a sense of the excitement derived by the professional historian from working with primary source materials.

Written materials for the elementary unit will concentrate on the traditional Ojibwe way of life, explaining religious practices and family relationships and giving accounts of the seasonal activities of maple sugaring, wild rice harvesting, hunting and farming. Materials for the secondary unit will present the history of the Ojibwe from earliest tradition to the 1970's, showing the effects of Canadian and U.S. Indian policies on the tribe over the centuries. The same nine "multi-level" filmstrips and the same selection of supplementary resource materials will be used with both sets of written materials. The units will be packaged in compartmented cardboard boxes.

Other Materials. Since 1948, the Society has published a magazine for elementary school teachers and students. The magazine and "Picture Packets," another publication, are described later in this chapter.

Loan Materials

In addition to materials sold to schools, the Society offers a selection of free loan materials. Films and slide sets may be borrowed for periods of two days; portable exhibit kits and a photographic exhibit may be borrowed for periods of one week. In 1971-72, these were loaned 17,834 times.



Portable exhibit kit

The portable exhibit kits cover five subject areas: "Indian Life," "Exploration and Fur Trade," "Economic Resources," "Pioneer Life," and "Prehistoric Minnesota." Each kit contains between ten and twenty artifacts and a brief written account of the subject represented. The objects are wired to two panels fitted into a small vinyl suitcase. To display the exhibit, a teacher opens the case and stands it on end. Although artifacts cannot be removed from the panels, the panels can be removed from the case and passed around the classroom.

Staff

An Educational Services Department is responsible for both education programs and exhibit planning. Staff positions include a Director of Educational Services, an Assistant Educational Supervisor, a Tour Coordinator, a Lesson Instructor, a Tour Registrar, a Research Assistant, a Writer-Editor, and twelve part-time Capitol Tour Guides. Commercial firms are contracted for exhibit design and installation, magazine graphics, and filmstrip production.

The Regular Staff

The Director of Educational Services, who has a Bachelor's degree in history and education, develops ideas for exhibits, plans and conducts teacher training programs, and supervises the Department's other activities.

The Assistant Educational Supervisor acts primarily as research assistant. Formerly an editor with the Society's Publications Division, she has a Master's degree in economics.

The Tour Coordinator, who has a Bachelor's degree in sociology and was previously a social worker and a tour guide, supervises the Capitol Tour and the Museum Lesson programs.

The Guide Staff

The Capitol Tour guides are undergraduate and graduate students, who work twenty hours a week, are paid $2.34 an hour, and have a maximum period of employment of two years.

During an initial two-month probationary training period, the guides read from packets of pamphlets, books, and research papers; accompany experienced guides on tours; and give tours on a trial basis. During the last month of the period, their tours are judged for accuracy and style by the Tour Coordinator. Guides whose performances are rated unsatisfactory are removed from the program.

Funding

About two-thirds of the Society's annual operating budget of approximately $2.4 million is state-appropriated. The remainder comes from grants, gifts, endowments, and membership fees. Each year a base sum of about $107,000 is spent on education programs. Not included here are the salary of the Research Assistant and much of the money spent on the production of curriculum resource units. The salary is paid through the State with federal funds made available by the Emergency Employment Act of 1971; the curriculum resource money is state-appropriated.

Coordination With Schools

Museum Lessons. Lessons for elementary school students relate to units on Minnesota history taught in the fourth, fifth, and sixth grades; lessons for high school students, to units on "government" and "social problems" taught in the ninth and twelfth grades. When developing the programs, staff members studied curriculum guides and talked with individual teachers to insure a tie-in with classroom studies. Each year, an increasing number of elementary classes are returning for more than one lesson with some attending all five in the series.

Curriculum Resource Units. In 1970, when considering the possibility of curriculum resource units, the Department of Educational Services sent a questionnaire to teachers in the State's 479 school districts to determine if there was a need for the units and if so, what kinds of materials should be included. The questionnaire asked for the titles of materials used in the teaching of Minnesota history and for indications as to the grades at which state history was taught,

whether the subject was presented chronologically or topically, what approach to it teachers thought should be taken, areas in which teachers were in need of supplementary materials, and the kinds of audiovisual equipment available in the schools. From the questionnaire, it was learned that teachers needed materials that would present an unbiased picture of minority groups and a realistic discussion of the State's development and that while few schools had sophisticated audiovisual equipment, most had filmstrip projectors. On the basis of this information, the Department decided to propose development of the units and to make the basic medium filmstrips.

Prototypes of the Ojibwe unit will be piloted and evaluated in several public school classrooms. After necessary changes are made, about 3,000 copies of the kit will be produced and workshops held throughout the State to instruct teachers in the content and use of the units. Content portions of the workshops will be led by Ojibwe men and women.

Training Teachers

Every fall, day-long "Teacher Institutes" are held at five locations in the State. The programs acquaint teachers with community resources and Society educational materials and provide information for use in the teaching of state history, state government, and social problems.

Each institute deals with a subject pertaining to the location in which it is held. Usually the agenda includes a talk by a specialist, a workshop during which teachers exchange ideas about methods of classroom presentation, a break for lunch, and a field trip to a nearby site. In 1972, the subjects were "Immigration," "Archeology," "the Minnesota Historical Society," "Contemporary Indian Programs," and "Political History and Government."

The Director of Educational Services begins to arrange for an institute series during the preceding summer, choosing sites representing a wide geographic spread, selecting topics, and writing to school superintendents for permission to hold the gatherings. Districts granting permission agree to provide facilities,

custodial help, and food.

The institutes are publicized through the Society's Catalog of Educational Services and a journal for school principals and administrators, published by the State Department of Education. Teachers pay a $4 registration fee.

Informing Teachers

At the beginning of the school year, a Catalog of Educational Services is sent to every public school in the state and to many private and parochial schools. The mailings are addressed to individual teachers on the Society's mailing list and to principals and social studies teachers in general.

Bi-monthly during the school year, a newsletter is sent to all teachers on the mailing list and to other teachers whose classes are scheduled for Museum Lessons.

Facilities

In addition to exhibits, the Chautauqua Room contains a raised seating platform, that holds fifty students, and a "teaching wall" outfitted with electric outlets, a florescent light, a blackboard, and a map. Attached to the wall, are shelves and two storage cabinets. Deep drawers beneath the counter of the Trading Post provide additional storage.

A guide room -- a remodeled storage area -- in the basement of the Capitol serves as dressing room, meeting room, and lounge for guides.

Publications

Catalog of Educational Services -- a twenty-page booklet that includes program descriptions, instructions for obtaining services, and an annotated bibliography of Society publications.

Educational Services Newsletter -- a four-page bulletin issued bi-monthly during the school year and containing information about in-house and extension programs.

Picture Packets -- sets of black-and-white photographs accompanied by sheets of background information. The packets are sold to schools for 75¢ a piece and cover eight subjects areas, including "Minnesota Pioneers," "Transportation in Minnesota" and "Afro-Americans in Minnesota History."

Roots -- a magazine used by elementary teachers as a supplement to State history texts. Written at approximately a sixth-grade level and accompanied by a teacher's guide, Roots is issued fall, winter, and spring by the Educational Services Division. Rates are $4 a year for an individual subscription and $2.50 a year for a group order of ten or more. Each issue treats a single topic in depth.

A recent issue, devoted to state government presented government as a living process, examining the "human aspects" of the subject through ten short articles illustrated with photographs, diagrams, maps, and charts. Included were a fictional diary based on newspaper accounts of the State's constitutional convention in 1857, an article by a legislator describing a typical day at the Capitol, and an interview with a lobbyist from the League of Women Voters.

"Gopher Historian" Leaflets -- illustrated leaflets, each containing from twelve to twenty pages and dealing with ore aspect of Minnesota history. The publications are written at a fourth grade reading level and cost 75¢ apiece. There are five in the series.

There are 1,100 lobbyists registered with Minnesota's House of Representatives, and 996 lobbyists are registered with the Senate.

The **Minnesota School Bus Operators** keep their eye on legislation that affects the safety and economy of school transportation. Right now they are trying to raise the weight restrictions on certain roads. School buses weighing over four tons are not allowed to use some roads, while other trucks are exempt from the rule. The **School Bus Operators** want to raise the limit to seven tons. That way, they say, children won't have to walk so far to catch a bus.

The lawyers from the **Legal Aid Society** do not lobby for themselves, but for their clients, who cannot afford a lawyer's help. The lawyers write and study bills, testify before legislative committees, and point out possible legal problems a bill might raise. One of their clients is the Minneapolis Tenants Union. During the last session they lobbied successfully for a bill that would keep landlords from evicting or harassing tenants who complained about building code violations, such as leaking roofs, unsafe wiring, or lack of heat.

The **Nine Mile Creek Citizens Committee** is a group of residents lobbying for water quality standards for urban creeks. They want to save the streams from being destroyed by highway construction, land developers, and industrial wastes. They are planning legislation for the 1973 session.

The **Minnesota Candy and Tobacco Distributors Association** employs two lobbyists. They want to reduce the taxes on cigarettes, or at least keep them from rising. In last session's Omnibus Tax Bill, the governor wanted to increase the tax on cigarettes by nine cents a pack. The candy and tobacco lobby persuaded the legislature to raise it only four cents a pack. They are also working for laws to impose stiffer penalties on people who place foreign objects (needles, razor blades) in Halloween candy.

The **Minnesota Farmers Union** watches any legislation that affects farm families and rural communities. They are lobbying for laws to protect the interests of the family farmer by saving family-size farms. They are also trying to stop the growth of farms owned by large business corporations.

The **Federation of County Fairs** lobbies in favor of pari-mutuel betting. In the last session a bill was introduced that would allow county fairs to hold horse races and give them some of the profits. The idea failed because of the intense lobbying of church groups.

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AN INTERVIEW WITH A LOBBYIST

Mrs. Frances Boyden is a volunteer lobbyist for the League of Women Voters. The League grew out of the women's rights movement of the last century. When the leaders of the movement, who were called "suffragettes," finally won the right to vote in 1920 after more than fifty years of work, they organized the League of Women Voters. The purpose of the League was to help the new women voters use their votes intelligently, and, beyond that, to promote the informed and active participation of all U.S. citizens in their government.

The League does not support any political party and does not back candidates for public office. Because it is not tied to political parties, its members feel they can work for the public interest. In the interview below, Mrs. Boyden tells about lobbying for the Minnesota Chapter of the League of Women Voters, from her own experience.

A page from Roots.

THE FORT WORTH MUSEUM OF SCIENCE AND HISTORY

Purpose: "The maintenance of a place where biological, geological, and zoological collections may be housed; to increase and diffuse a knowledge and appreciation of history, art, and science; to preserve objects of historic, artistic, and scientific interest; to offer popular instruction and opportunities for aesthetic enjoyment; and to these ends to establish and maintain in the City of Fort Worth a museum."[1]

Governing Authority: Municipal.

Location: Suburban Fort Worth, Texas.

Community Served: The greater Fort Worth area.

Year of Founding: 1939.

Facility: Built in 1953, the Museum houses offices, a planetarium, a science laboratory, and classrooms in addition to exhibits.

Collections: Meteoritics, paleontology, ethnology, African zoology, early firearms, dolls and toys, and Texas history.

Education Programs: In-house and extension programs for children and adults are offered through a Program Section.

Education Staff: Four full-time staff members, approximately seventy-one part-time teachers, and approximately seventy-three volunteer docents.

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1. From the Museum Charter, adopted May 21, 1941.

Hours: From 9:00 a.m. to 5:00 p.m., Monday through Saturday, and from 2:00 p.m. to 5:00 p.m. on Sunday. Planetarium shows are given daily during the summer and on weekends during the school year at 1:00 p.m., 2:30 p.m., and 3:30 p.m.

Admission: General admission, free. Admission to the planetarium, 50¢ for children under twelve; $1 for teenagers and adults.

Attendance: Approximately 500,000 visitors a year.

For further information, write to Mr. Lawrence E. Brown, Program Director, Fort Worth Museum of Science and History, 1501 Montgomery Street, Fort Worth, Texas 76107.

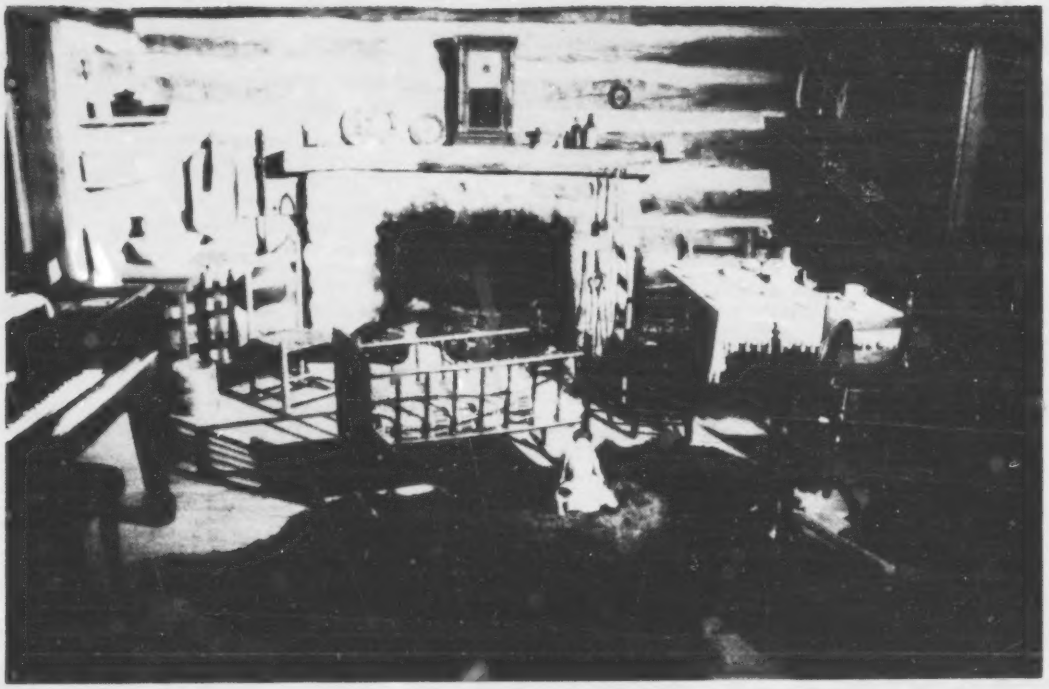
THE FORT WORTH MUSEUM OF SCIENCE AND HISTORY

The Fort Worth Museum of Science and History, established in 1939 by a group of elementary school teachers, has grown from a children's museum to a "family" institution, with exhibits and programs for all ages. Dedicated to increasing public awareness of man's natural and cultural environments, the Museum occupies a modern, two-story building on Amon Carter Square, a "museum district," accommodating also three art museums.

Exhibits

A Hall of Texas History, on the Museum's ground level, traces the State's development from prehistoric times to the present. Exhibits include miniature dioramas of a Caddoan Indian village, an early Spanish mission, and scenes of the Alamo as well as a display of documents signed by famous Texans. In a section devoted to the history of Fort Worth, you learn that the City was established as an army post in 1849 and that by 1870, when the great cattle drives were underway, had grown to a roaring "cowtown," a last watering place for cowboys about to enter Indian territory. A diorama of the City of that era is complete with a general store, a "Farmer's Saloon," and a Stage Coach Office tended by a peg-legged manager. Following its initial boom, the City slid into a brief decline and then flourished again with the coming of the railroads and the discovery of oil. Dioramas portray a slumbering Fort Worth marked by empty storefronts; the City's first train being greeted by a cheering crowd and a brass band; and turn-of-the Century businessmen gathered in a hotel lobby to sell shares of oil company stock. Additional exhibits are devoted to Texas in the twentieth-century. At the far end of the Hall, are six nineteenth-century period rooms -- a blacksmith shop, a schoolroom, a Victorian parlor, a barber shop, a general store, and a log cabin. The cabin has been reconstructed of original logs and contains, in addition to other authentic furnishings, Fort Worth's second earliest piano, brought to the City by oxcart in the mid-1800's.

Upstairs, on the Museum's second level, are other major exhibit halls -- a new Hall of Medical Science, which traces the history of medicine from prehistoric times to the present and features a section on human



Log cabin, the Hall of Texas History

Exhibit classroom

physiology; a Hall of Man, which presents an overview of world cultures and includes an exhibit of artifacts from pre-Columbian Mexico; a live animal room; a Bird and Mammal Hall; a Geology Hall; and space for temporary exhibits. There is also a planetarium.

A special classroom for visiting school groups has open lighted cases lining one wall that display "touch" artifacts relating to pioneer life in America and a number of world cultures. The American objects range from early carpentry and farming tools to such household necessities as butter press, bedwarmer, and candlemold. Additional collections represent Polynesian, Japanese, Chinese, Islamic, African, and American Indian peoples.

Programs Given in the Museum

Lecture Demonstrations

Weekday mornings and afternoons volunteer docents give hour-long "lecture demonstrations" to classes of all grade levels for a charge of 50¢ a student. In 1972, 94,000 youngsters of kindergarten through high school age took part in the fifty-one programs, each of which relates to a science or social studies unit taught in Texas public schools and is named for the unit to which it pertains. Most demonstrations consist of a slide show, a "see-and touch" artifact presentation, and a gallery tour.

"Community Changes." "Community Changes," a program for third-graders, compares the Fort Worth of a hundred years ago with the city of today. Four concepts are conveyed: that geographic features affect man's behavior, that communities adapt differently to different environments, that cultural forces change geographic features, and that cultural features of the past still exist today.[1] The program begins in the exhibit classroom with an informal slide talk lasting about twenty minutes.

1. "Our Community and How It Has Changed; Background Information for Docents," p. 1.

The slides are of paintings of the early West (from the Amon Carter Museum of Western Art) and of old photographs of early Fort Worth buildings, many of which are still standing. The docent proceeds at a leisurely pace, making a brief statement about each slide and stopping frequently to ask and answer questions. She tells of the Indians who first inhabited the area, of everyday life in pioneer times, of the coming of the railroads; of early transportation, churches, and industries; and ends by showing a view of the City's present skyline and asking that the children work to keep the City clean, "preserving clean air, pure water, and things of beauty forever." Then she passes around artifacts from the Pioneer Life exhibit for the children to handle and explains how the objects were used. Finally, she escorts participants to the Hall of Texas History, where they spend up to twenty minutes studying exhibits on the history of Fort Worth. She does not lecture in the Hall. As the students leave to return to school, she gives each of them a list of the names and addresses of buildings shown in the slide talk so that they can visit the landmarks.

Lecture Demonstrations for the Handicapped. Programs for blind, deaf, and mentally-retarded children follow the same plan as those for other youngsters but are given at a slower pace and devote more time to touching. Blind children visiting the Hall of Texas History are taken into the period rooms, which are behind glass and normally off-limits to visitors, for a leisurely tactile experience.

Other Formal Programs

Foreign Language Program. An experimental program, begun in the fall of 1972 in conjunction with a local high school, allows accelerated students to earn course credits in a foreign language by working in the museum one day a week to develop foreign language tours of exhibit areas. Presently two students are participating. Both are researching and writing scripts for tours in Spanish, one to deal with the history of medicine and the other with anthropology. On finishing the scripts, the students will give tours to their classmates. The Museum hopes to train the youngsters and future participants in the program to be junior docents

"Community Changes"

who will give lecture demonstrations in Spanish to classes of Mexican-American children.

Planetarium Shows. The Museum's Noble Planetarium gives programs to both school groups and the general public. Of the approximately 48,435 people who take part each year, over half are schoolchildren attending weekday, hour-long lectures relating to classroom units on astronomy, geology, and geography. Regularly-scheduled shows are given daily in the summer and on weekends during the school year. Admission is 50¢ for children under twelve and $1 for other visitors. Presently, the planetarium shows and live animal lecture demonstration programs are given in English and in Spanish to Mexican-American groups. Beginning in the fall of 1973, all lecture demonstrations will be available in Spanish.

Classes

Each year more than 5,500 children and adults take part in Museum classes covering a range of subjects and taught by paid, part-time teachers.

Preschool classes. Preschool classes are given in two-hour sessions from mid-September to mid-May. Tuition is $72 a year for three-year-olds, who meet once a week, and double that for older children, who meet twice a week. Scholarships are available. A teacher and an assistant are provided for every eighteen to twenty-two children.

The children spend the first half hour of the class playing with blocks and other toys, noticing as they play objects from the Museum's collections, which their teacher placed about the room before class began. After the play period comes a lesson based on a theme represented by the objects and involving a story hour, an arts and crafts session, and often a short visit to one or two gallery exhibits. Although themes usually are in the natural sciences, they occasionally pertain to Texas history or American Indians.

At Thanksgiving time, as part of a broader study of the prairie environment, five-year-olds complete a two-lesson unit called "Rivers and Streams," which is about Plains Indians. The children listen to

stories of Indians and pioneers and to a recording of Indian music, visit a Plains Indians exhibit in the Hall of Man, grind corn with a stone mortar and pestle, sew pieces of deerskin together, play Indian drums and turtle rattles, and make themselves headbands from wild turkey feathers. As with other lessons, they are reminded of "Rivers and Streams" several weeks later, when artifacts relating to the unit are placed about the classroom in an informal follow-up, which reinforces the concepts and helps the teacher to determine from the children's comments and questions how much was learned.

Classes for Older Children and Adults. Five sessions of classes for six-year-olds and above are offered each year. The sessions run for eight weeks at a time during the school year and for six weeks in the summer. Classes for children are geared to specific age levels. Teenagers may take adult classes as well as those designated for them.

Most classes for children cost $10 or $15. Subjects are primarily in arts and crafts and the sciences; several workshops in American history recently have been added. Class size usually is limited to no less than ten and no more than fifteen students.

Two classes in archeology, both taught by a professional archeologist, were given in the summer of 1972. A class for teenagers introduced archeological methods. Participants observed archeologists at work in the field and practiced in a "salted square" in the Museum's courtyard, learning to locate, lay out, excavate, and report a site. A class for ten-through-twelve-year-olds concentrated on Texas Indians. Through field trips to local sites and examination of artifacts from the Museum's collections, youngsters discovered how an archeologist learns about a culture by studying material objects.

Other Informal Programs

Clubs. For young people aged nine to eighteen, there are clubs in astronomy, the natural sciences, and journalism. Natural science and astronomy club members work at research projects under the guidance of the Museum's curatorial staff. Members of the

Journalism Club, all eighteen of whom are eighth and ninth graders, produce a monthly newspaper called the Square Circular that reports on events at the Museum of Science and History and the other museums on Amon Carter Square. Every third month, the Circular features pieces written by students enrolled in a Museum class in creative writing.

Experimental Art Program. Besides regular classes, the Museum has offered since 1960 free "Experimental Art Classes" to promising fifth-grade students from Fort Worth schools. The classes meet six hours a week and are conducted by professional artists.

Extension Services

Weekly Television Program

On Sunday mornings, a Museum staff member (usually the Director) appears on "The Children's Hour," a weekly Fort Worth television program, to give a ten-minute talk on one or more objects from the Museum's collections and to announce upcoming events at the Museum. Since 1963, when the appearances first began, Museum attendance has nearly quadrupled. The program reaches close to 1,000,000 viewers a week.

Loan Exhibits

Teaching collections of insects, reptiles, birds, and small mammals are loaned regularly and free of charge to area schools. Many of the specimens were gathered and mounted by members of the Museum's Natural Science Club. About 25,000 children use the collections each year.

Several times a year, small collections of cultural history artifacts are loaned to individual teachers upon request. The Museum will expand its artifact loan service when funds are available.

Staff

The Museum is organized into three sections: Programs, Interpretation, and Support. All activities described here, as well as other special programs, are the responsibility of the Program Section, headed by a Program Director. Besides the Program Director, other staff members involved with education programs are a School Coordinator, a Registrar, a Secretary, seventy-one part time teachers, and about seventy-three volunteer docents.

Regular Staff

The Program Director, a former planetarium director, college instructor, and elementary school teacher, has a Bachelor's degree, with majors in mathematics, physics, and history. He supervises all education programs for children and adults and shares responsibility for the Museum with the Director of Interpretation in the Executive Director's absence.

The School Coordinator, an employee of the Fort Worth public schools, ensures that lecture demonstrations are coordinated with the curriculum of Texas schools. Besides developing, scheduling, and occasionally giving lecture tours, she trains social studies docents. She is a former teacher,principal, and school supervisor with a Bachelor's degree in history, Master's degrees in history and education, and a Doctorate in education, who has written a number of social studies textbooks for the elementary grades.

The Registrar, who is directly responsible for class programs, schedules and publicizes classes and registers participants.

The Program Secretary handles typing and correspondence.

Part-Time Staff

Preschool Teachers. Seventeen of the Section's seventy-one teachers are assigned to the preschool. Of the seventeen, eight are regular teachers and nine assistants. Most, but not all, have degrees in

elementary education or in child guidance. All work four hours a day, two or three times a week, and are paid from $5 to $6 an hour. Because the Museum receives many applications for preschool teaching positions, it can be selective in hiring.

Other Teachers. The fifty-four teachers of classes other than preschool include school teachers, businesspersons, artists, and professional craftspeople from the community as well as several junior curators. All are specialists in the subjects they teach and are paid $5 or $6 an hour.

Docents

Backgrounds and duties. The docents belong to the Museum's Science and History Guild, an organization of about 125 women whose purpose is to stimu'ate public interest in the Museum and to provide volunteer help. Guild members pay annual dues of $6 and contribute forty-eight hours of time to the Museum each year. Most of the women are college-educated and range in age from twenty-one to forty.

During the summer of 1972, the Museum tripled its number of docents through a media campaign utilizing newspaper articles, free radio announcements, and taped television shows of Museum programs.

Docents give either planetarium lectures, social studies lecture demonstrations, or natural science programs. Each woman spends some portion of her time requirement doing library research in her field.

Training. Docents are trained at the beginning of the school year. Until recently, training in each field was done independently by Museum specialists in that field. In September 1972, a more comprehensive training program, developed and coordinated by the Program Director, was begun.

For science docents, the program lasted two weeks; for social studies docents, three. Its first week consisted of five, three-hour sessions introducing exhibit content and behind-the-scenes operations. The sessions were attended by all docents and conducted by the staff of Collections, Exhibits, and several

other departments. The second week of the program involved three sets of five additional morning-long sessions, with each set tailored to the requirements of docents specializing in one field. The women followed demonstration tours of exhibit areas, received instruction in the use of audiovisual equipment, and discussed teaching techniques and program rationale. The sessions ended with question-and-answer periods. During their third week of training, social studies docents practiced using audiovisual equipment and giving tours to one another.

For planetarium and natural science docents, in-service training is given once a month.

Funding

The Museum's operating budget for 1972 was $376,415. About 36% of this sum came from class and planetarium fees and gift shop sales, 37% from the City of Fort Worth, 16% from the United Fund, and 11% from Fort Worth's Tarrant County.

Early in 1972, in an effort to eliminate the need for United Fund support and as part of a thirty-year plan to become self-sufficient, the Museum began a drive to gain support from Texas businesses and foundations. A brochure announcing the drive and describing Museum services and plans for the future was sent to prospective funding sources. Designed to be too big to fit into a desk drawer or a waste-basket, the brochure brought in $196,622.82-worth of pledges in 1972 -- a sum well in excess of the amount projected.

The Museum's class program is self-supporting. In 1972, the Program Section earned approximately $88,715 in class fees and about $3,317 in rental fees from organizations leasing classroom and auditorium space during hours classes were not in session. The Museum as a whole brought in an additional $47,772.25 in lecture-demonstration and planetarium fees. This amount includes $22,000 paid by the Fort Worth Public School system at the end of the school year to cover both the salary of the School Coordinator and lecture demonstration fees.

Coordination With Schools

Museum Programs and the School Curriculum

Since the time of its founding by a group of school teachers, the Museum has had close ties with the Fort Worth Public Schools and its school programs have related directly to specific units taught in City classrooms.

Since 1955, a School Coordinator has been stationed at the Museum to maintain and foster the museum-school relationship. The present coordinator works closely with school curriculum consultants in physical education, science, social studies, bilingual, special education, and federal programs at both the elementary and secondary levels and with resource teachers from schools in underprivileged areas. Twice a month she attends school curriculum planning meetings. Her frequent meetings with teachers and administrators and her close association with the schools,where she has served in a number of capacities since 1951, enable her to be informed of and prepared for changes in curriculum before they take place and aware of teachers' attitudes and concerns.

Program Development

In the spring of 1972, Fort Worth Public Schools adopted a new social studies curriculum which took effect that September. Under the new curriculum, the grade levels at which a number of subjects were taught were shifted; and the schools began to place greater emphasis than they had previously on minority history and topics of social concern. As soon as the changes were adopted, the Coordinator set to work rewriting lecture demonstrations to fit the new curriculum so that by the fall she had revised all social studies programs for grades one through five. Revisions are in progress for other grade levels.

To test newly-developed programs, the Coordinator holds try-out sessions with classes from a nearby school. During the try-outs she notes students' reactions to the programs and asks for criticism and advice.

In the summer of 1973, the Coordinator will work with three school-paid consultants to translate lecture demonstration scripts used by docents into Spanish so that Spanish-speaking teachers bringing Mexican-American classes to the Museum can give their students accurate translations of slide lectures.

Scheduling Programs

Reservations for school programs are made by mail, by telephone, or in person, a week or more ahead of time. After settling on a time with the teacher, the School Coordinator fills out a group attendance record card, which she places on file, and a confirmation card, which she mails to the teacher ten days in advance of the day for which the visit is scheduled.

Attendance record cards are color-keyed for private and parochial, out-of-county, county, and city schools. The cards note the date and hour of the program; the size and grade level of the group; the name of the school, the school district, and the docent assigned to the lecture; and the name and address of the person in charge of the group. At the bottom of the card, there is a space for "special comments." Scheduling data are recorded also on a daily calendar.

Lecture demonstrations are scheduled so that no more than sixty students are in a hall at one time. Teachers bringing classes to the Museum on self-conducted tours are asked to notify the Museum of their plans beforehand so that schedules can be arranged accordingly.

Informing Teachers

At the beginning of the school year, a brochure describing the school program is sent to principals, teachers, and supervisors of all public, private, and parochial schools within a 200-mile radius of Fort Worth. Seventy-five-hundred copies went out in 1972.

At the beginning of each museum class session, brochures describing classes are mailed to area schools. These brochures, as well as letters announcing special exhibits, are distributed free

to Fort Worth Public School teachers through the school system's administrative offices.

Facilities

The Museum has thirteen classrooms besides the exhibit classroom previously described. Four of the rooms are used for preschool classes, eight for other classes, and one for high school lecture demonstrations. Preschool classrooms are furnished with tables and chairs, shelves for toys, and other standard equipment. Additional classrooms include science and photography laboratories, a "clay room" with a kiln, and jewelry-casting and art rooms. An auditorium that seats approximately 150 is used for lecture demonstrations and other group programs.

In addition to exhibits, the exhibit classroom has folding chairs to seat ninety, a screen for showing slides, a cabinet in which a slide projector and carrousels of slides are stored, and a projection table. For the convenience of docents giving slide lectures, lights can be controlled from the back as well as from the front of the room, a small reading light is attached to the projection table, and a flashlight pointer is kept in the slide cabinet.

Publications

Docent's Scripts -- five-to-eleven-page outlines used by docents as lecture demonstration references. Each script explains concepts to be covered and gives one or two paragraphs of background information as well as annotations for slides.

School Program Brochure -- a brochure that opens to become a poster, as shown. The front of the poster contains general information about exhibits, scheduling, fees, and school programs; the back, a map and a grade-by-grade listing of the programs with the classroom units to which they pertain.

Just for the Fun of It -- a twenty-page brochure describing classes and other informal programs and containing information about fees and registration. Classes are listed according to age level.

EXHIBITS

In addition to the exhibits described below, the museum maintains the Live Animal Room as well as the Hall of Mammals, in which exhibits habitat groups are displayed.

THE HALL OF GEOLOGY/PALEONTOLOGY depicts geological history from the Mesozoic era to modern times. Displayed for all school groups are such touch objects as ammonites, fossils, mammal bones, mammoth tusks, meteorites, and minerals. Of particular interest are Alosaurus, a Jurassic dinosaur, and herbarium collections of insects, gastropods, rocks, and minerals.

THE HALL OF MAN traces man's cultural developments around the world. On display are such varied exhibits as a 16th century Samurai warrior, a Chinese ratchaise, a Brahian skirt, native Indian costumes and shrunken heads from South America. A Northwest Coast totem pole greets visitors as they enter.

THE HALL OF MEDICAL SCIENCE, the newest and most extensive exhibit, includes the History of Medicine from paleolithic times to the present, a Physiology section, a redesigned Life Range display, and a Transparent Woman. Recent additions are three turn-of-the-century period rooms - a doctor's office, a dentist's office, and a drug dispensary.

THE HALL OF TEXAS HISTORY features a sequential story through the use of models, dioramas, and artifacts to depict the development of the state of Texas from its prehistoric Indian period to the present. Included are six period rooms in authentic, life-size detail - a log cabin, rural school room, a Victorian parlor, a blacksmith shop, a barber shop, and a general store.

SPECIAL EXHIBITS will be featured throughout the year by the museum to relate to current public interests. The museum will notify school groups of these exhibits and will arrange school programs to provide additional opportunities for classroom enrichment.

THE NOBLE PLANETARIUM, with its Spitz A3P planetarium projector, special effects, and prime sky, provides opportunities to teach many phases of history, geography, geology, and astronomy.

LOAN COLLECTIONS of insects, reptiles, birds, and small mammals are available for classroom use by calling the museum's Natural Sciences Department.

THE MUSEUM'S SCHOOL provides special class instruction for over 6,000 students a year. The classes for three-year-olds through adults are designed to make maximum use of the museum's collections, exhibits, staff, and facilities.

THE GIFT SHOP has available for interim students: science fair backboards, insect mounting equipment, rock and mineral specimens, shells, telescopes, star charts, microscopes, and books and publications relating to many areas of instruction.

PRESENTATIONS

Demonstrations and lectures are scheduled hourly, beginning at 9:30 a.m., Monday through Friday. Other days and hours may be arranged to meet special needs. Programs, presented by well trained docents or museum staff, last about an hour. Less time may be used for children with shorter attention spans.

SCHEDULING

During 1971-72, 97,000 children took part in this program. We suggest that an appointment be made at least two weeks in advance with the Museum School Coordinator, Dr. Rose May Beckham, so that your students may be accommodated. Telephone the museum, 817 732 1631, on school days between the hours of 8:00 a.m. and 4:00 p.m. A specific appointment time must be arranged for each program. Careful planning will allow your class to see several classroom programs on the same trip. Please notify the Museum School Coordinator of any change in plans.

PARKING

Adequate parking space is provided east and south of the museum. Buses may unload on Montgomery Street on the east entrance before parking on back of museum. When entering from the east, classes should go up the stairs to the tour office, just down on the right at the end of the hall. When entering from other directions, please stop at the Gift Shop and ask directions or assistance. Upon arrival, the person in charge of each school group should contact the tour office on the second level. Time should be allowed for a restroom break prior to the lecture to afford less distraction for both lecturer and audience.

FEES

For groups of twenty or more students, the fee is fifty cents (50¢) per person. Groups of fewer individuals have a minimum charge of ten dollars ($10.00). Although your cost is only fifty cents per person, these specially designed school programs actually cost ninety-seven cents (97¢) per person. The difference of forty-seven cents (47¢) is made up by the museum from other sources of income.

PAYMENT

The museum prefers to bill each school system at the end of the school year. However, a check or cash for each program is acceptable. Regular school groups from the Fort Worth Public School System are paid for by the School Board. However, all vocational and federal programs are billed separately to meet the requirements of the Department of Health, Education, and Welfare.

SUPPLEMENTARY INFORMATION

Address	Fort Worth Museum of Science and History 1501 Montgomery Street Fort Worth, Texas 76107
Telephone	817 732 1631
Hours	Monday through Saturday, 9:00 a.m. to 5:00 p.m. Sunday, 2:00 p.m. to 6:00 p.m. Sunday Summer Hours, 2:00 p.m. to 6:00 p.m.
Closed	New Year's Day, July 4th, Labor Day, Thanksgiving, Christmas Eve, Christmas Day
SNACK BAR	A small snack bar with coin operated machine is available. Only drinks, candy, gum, and ice cream are dispensed.

PLEASE ASK FOR ADDITIONAL INFORMATION IF NEEDED

fort worth museum of science and history

The Square Circular -- an eight-page monthly newsletter produced by the Museum's Journalism Club. Through interviews and other features, and a calendar of events, the Circular reports on activities in all of the museums on Amon Carter Square.

THE COLORADO STATE MUSEUM

Purpose:	To collect, to preserve, and to interpret the history of Colorado.
Governing Authority:	State.
Location:	Downtown Denver.
Community Served:	The State of Colorado.
Date of Founding:	1879.
Collections:	Colorado history and ethnology, Mesa Verde archeology.
Facility:	A three-story building, built in 1915, with galleries on four levels. As headquarters for the State Historical Society of Colorado, the Museum houses, in addition to exhibits, a library and the offices through which statewide programs are carried out.
Education Programs:	In-house and extension programs for children and adults are offered through the Formal Education Department of the Historical Society. In addition to the State Museum programs described in this chapter, the Society offers guided tours of a number of its regional museums.
Education Staff:	Four full-time paid staff members, approximately fifteen volunteer docents, and between one and two volunteer "student aides."

Hours: 9 a.m. to 5 p.m. on weekdays; 10 a.m. to 5 p.m. on weekends and holidays.

Admission: Free.

Attendance: 178,669 in 1971-72.

For further information, write to Miss Diane McDonough, Curator of Formal Education, Colorado State Museum, 200 Fourteenth Avenue, Denver, Colorado, 80203.

THE COLORADO STATE MUSEUM

The Colorado State Museum, founded in 1879, occupies a three-story, marble and granite building in downtown Denver. As headquarters for the State Historical Society of Colorado, the Museum houses a library and offices for statewide programs as well as exhibits.

Exhibits

Through artifacts, graphics, and miniature dioramas, the Museum's ten galleries tell the story of Colorado from the days of the prehistoric pueblos of Mesa Verde to the early twentieth century. Subjects covered include "Indians," "mining," "the fur trade," "railroading," "irrigation," "wheat harvesting," and "cattle."

A ground-floor teaching exhibit room, built in 1967 as part of a project to foster cultural understanding among schoolchildren, contains exhibits representing Colorado's four predominant ethnic minority groups -- the blacks, the Hispanos, the American Indians, and the "Orientals" (Chinese and Japanese). Clothing, household objects, and other items traditionally used by the groups are exhibited on six panels that can be slid in and out of sight on tracks built into one wall of the room. (There is a panel for each minority as well as two "combination panels" -- "Indian-Hispanic" and "Black and Oriental"). The panels are positioned so that they can be used singly or in pairs.
Displayed on the room's remaining walls are black and white photographs of children and families of the four minorities.

Programs Given in the Museum

History Lessons

On weekday mornings and afternoons, hour-long history lessons are given in the galleries and the teaching exhibit room to elementary and secondary school classes and other groups of young people.

Sliding exhibit panel

The programs are taught by staff instructors and volunteer docents. Attendance at each is limited to thirty-five. In 1971-72, approximately 15,000 children took part.

There are eight lessons, each of which deals with a single aspect of Colorado history. Six of the programs make up a "Colorado History Series;" two constitute a "Minority History Series." All involve informal group discussion for which children sit in a circle on the floor and handle a variety of exhibit materials. Frequently slides are shown during the discussion, and often background music is played. Galleries in which the lessons take place are closed to other groups while the programs are in progress. One minority history lesson is described here.

The "Black and Oriental History Lesson". This lesson, like its counterpart, "Indian-Hispanic History," attempts to promote understanding of two minorities by presenting an accurate and vivid account of the groups' backgrounds and contributions to Colorado history.

The program begins with a thirty-to-forty-five-minute discussion, illustrated with slides, which concentrates on the origins, the migrations, and the lives in Colorado of, first the blacks and then the Japanese and the Chinese. Many of the slides are of old photographs and several tell of real people. The students meet a black laundress who started the first church services in nearby Central City, Colorado and a black businessman who helped to bring railroads to the State. These and other pictures of early settlers are of special interest to the children and provoke many questions. The instructor develops three themes, elucidating culture differences between the Japanese and the Chinese; making the point that the triumph of blacks over slavery should serve as an inspiration to all races; and contrasting the experience of the blacks, who were cut off from their cultural traditions, with the experiences of the Japanese and the Chinese, who were able to continue their traditions in the New World.

The "Black and Oriental History Lesson"

After the slides, the children try on hats and shoes, a kimono, and other clothing and handle tools and household objects used by the two groups. If there is time, sliding exhibit panels are used to reinforce the slide discussion as the youngsters try to identify the materials on display. Sometimes the instructor brings out two grocery bags filled with packaged food in common use today and made of ingredients contributed by the two minorities and asks the children to guess the origins of the items.

Methods. When a class arrives at the teaching exhibit room the room is bare except for rugs, photographs, and occasionally a slide projected on the screen of the room's audiovisual unit. As the lesson progresses, a variety of tactile materials are brought out to illustrate the discussion. The materials are kept hidden away in trunks and cabinets until the appropriate moment so that the children's attention will not be attracted to the items prematurely.

The lesson is relaxed and leisurely with the students asking many questions and determining by their indications of interest the amount of time spent on the topics discussed. Analogy frequently is used to explain the unfamiliar, as during a recent lesson about Plains Indians, when the instructor compared the Indian's custom of sharing a pipe with his guests to our custom of sharing coffee with ours.

Lessons for the Handicapped

Once a year, several small groups of handicapped children from Denver's public school for the handicapped take part in the history lessons. Although the groups generally include both physically handicapped and mentally-retarded youngsters, the Museum finds it possible to present successfully essentially the same lesson content as usual by relying more than usual on tactile experiences.

Gallery Programs for Times of Peak Visitation

During May and early June, when there are as many as 850 visitors to the Museum in one day, three docents station themselves in first-floor exhibit areas with small collections of "touch" artifacts.

As self-guided groups, many of them schoolchildren from outside the Denver area, tour the galleries, the docents answer questions and supervise the handling of the artifacts. A fourth person -- either a docent or a staff person -- directs traffic.

Guided Tour

The Museum offers one guided tour, "Ways of Living in Colorado." The program concentrates on first-floor galleries, lasts an hour, and is available only to school groups from outside the Denver area.

High School Work-Study Experiment

In 1971, at the instigation of a history teacher from a Denver public high school, the Museum established a pilot work-study program enabling eleventh and twelfth graders from the school to work during the second semester of the academic year on Museum projects for course credit.

Over a three-month period, youngsters who elect to do so work in the Museum for two-hour periods twice a week, concentrating on areas of their choosing. So far, they have taught programs for the Formal Education Department, catalogued collections, and helped to install exhibits. Begun in response to a cry for "relevance" from the students, the program has met with limited success because of unrealistically high student expectations. In 1971, there were ten participants; in 1972, there were only two.

Informal Programs

In the summer special ninety-minute programs are offered twice daily, Monday through Saturday, to children and adults. Each program entails a gallery lesson for adults and a story hour for children, followed by a half-hour film for all ages. For the story hours, costumed teenage volunteers present fictionalized accounts, illustrated with slides and touch materials, of events in Colorado history. In 1972, 5,069 visitors, most of whom were tourists, took part in the programs.

Extension Services

Portable Exhibits

Portable exhibit kits of two types -- "Case Histories" and "Grandmother's Trunks" -- are loaned free to schools throughout the state for three-to-five-day periods. In 1971-72, the kits were circulated 1370 times, reaching 93,183 children.

Case Histories. The purpose of the Case Histories is to bring a quality of immediacy to the study of state history by giving students the chance to handle and examine objects read about in Colorado history textbooks. There are ten copies of each of four kits: "Cliff Dwellers," "Plains Indians," "Trappers and Traders," and "Mining." The units are packaged in thermal picnic hampers (approximately 26" by 18" by 15"), bought from a local distributer for $15 a piece. Each kit contains between six and ten artifacts and a teacher's guide.

The "Cliff Dwellers" Unit simulates an archeological dig at a stratified Mesa Verde site. The main component of the kit is a "dig box" containing artifacts and other cultural remains as well as tools to be used in excavation. Additional materials include a reference book to be used by the teacher, a film, and a teacher's guide.

The unit is sent to teachers in two "installments" so that the film and source materials are received a week before the arrival of the box. The box, which may be kept for five school days, contains artifacts (both originals and reproductions) of stone, bone, pottery, and cloth; a squash seed; a corn cob; and a piece of rabbit fur, buried in a mixture of sand and coffee grounds at three levels. The coffee and sand mixture is used as the burying medium because it simulates the earth at Mesa verde and is lighter than 100 percent sand.

The teacher's guide suggests the class be divided into six groups for the excavation and that each group uncover and document a single layer of one of the box's two grids. The guide also suggests that the teacher refrain from telling the students about Mesa Verde or showing the film, which portrays life as it may have been lived at the pueblo, until after the youngsters have formulated hypotheses and drawn conclusions subsequent to excavation.

Grandmother's Trunks. Like Minority History Lessons, "Grandmother's Trunks" represent the backgrounds and contributions of Colorado's four predominant ethnic minority groups. There are four units, each devoted to one minority. The kits are packaged in old-fashioned looking trunks, measuring 21" x 14" x 9" and lined with paper of a Victorian design. There are five copies of each unit. Each contains a teacher's guide and an assortment of three-dimensional objects as well as other materials chosen to reflect the traditions and values of a family typical of the subject group. For protection, fragile objects are wrapped in tissue paper or tied inside handkerchiefs or scarves, which are part of the exhibit. In the "Black Grandmother's Trunk," small down pillows inserted in crevices help to cushion objects during shipment.

When developing the trunks, the Museum consulted with grandmothers and other people from the black, Japanese, Hispanic, and Sioux Indian communities and based selection of materials on the recommendations of those consulted. The main objective of the trunks is to foster respect for and understanding of the minorities represented. The units also seek to demonstrate that there is much to learn about history from the belongings and recollections of one's own family and that while every culture has unique characteristics, it also has much in common with other cultures.

The Hispano Grandmother's Trunk contains objects which might have been saved by a Colorado woman of Spanish Colonial descent who is still alive today and has a grandchild in the fifth grade. Many of the items are religious, reflecting the importance of Catholicism to the Spanish peoples of the Southwest. There also are a number of non-religious objects (a mantilla comb, a lace handkerchief, etc.) and an album of family photographs.

The unit teacher's guide suggests that the teacher present the trunk as a kind of game. First the children guess the contents of the unit and then they "discover" it by unpacking it themselves. As a follow-up activity, they trace their own family histories. With the guide is a packet of recipes for the children to try at home.

Films

Eight 16 mm sound and color films, ranging in length from fifteen minutes to half an hour, are loaned free, for three-day periods, to schools and community groups throughout the State. Each film deals with one aspect of state history. In 1971-72, the loans reached 369,712 children and adults. There are approximately thirty copies of each film.

Materials Sold to Schools

Filmstrip. A forty-frame filmstrip entitled "The Trappers" is sold to schools for $7.50. Produced by the Society, the filmstrip is accompanied by a "script booklet" which contains background information about the fur trade, an annotation for each frame, and a bibliography.

Tape Recordings. Duplicates of eight sixty-minute and ninety-minute tape recordings from the Society's collections are available to schools. The recordings are of interviews with old-timers, lectures delivered at the Society, and documentaries. Schools may purchase duplicating services only, supplying the clean tape themselves for $1.25, or both tape and duplicating services for $4.75.

Staff

A Formal Education Department, responsible for the programs just described, has four full-time employees: a Curator of Formal Education, an Assistant to the Curator, a Museum Aide* and a Receptionist/ Secretary. This paid staff is supplemented by approximately fifteen volunteer docents.

The Paid Staff

The Curator of Formal Education supervises school programs and works with the Society's exhibits and research staffs to develop exhibits and programs, both at the Museum and at the Society's historic properties. She holds a Bachelor's degree in history and

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* The Assistant to the Curator of Formal Education and the Museum Aide are referred to elsewhere in this chapter as "instructors."

is studying for a Master's degree in social science education.

The Assistant to the Curator of Formal Education conducts lessons; develops kits and lessons; maintains Grandmother's trunks; and schedules films, trunks, and Case Histories. She was formerly an interior designer with an architectural firm and has a Bachelor of Fine Arts degree.

The Museum Aide works with the Assistant to the Curator to plan and teach lessons and to develop and maintain kits, also devoting some time to clerical duties and to working at the Museum's sales and information desk. She has a Bachelor's degree with majors in education and history and is studying for a Master's degree in urban planning.

The Docents

Backgrounds and Duties. The department's fifteen docents are mostly college-educated women, who range in age from thirty to sixty. All are members of the Historical Society's auxiliary. Of the fifteen, nine regularly give tours and lessons either one morning or one afternoon a week.

Training. Formal training for new docents takes place at the beginning of the school year. Every year for the past several, the Museum has tried a different approach to training, attempting to find a formula that would produce an adequate number of enthusiastic volunteers. In 1972, the training involved five two-and-a-quarter-hour sessions held on consecutive mornings and each devoted to one of the Museum's five most popular lessons. Participants took home reading lists, outlines of lesson content, and schedules for upcoming lessons. Subsequently each woman observed several lessons given by staff members. A week and a half after the training period, a meeting was held for the purpose of answering questions and scheduling new docents for their first lessons.

Student Interns

During the spring semester of 1972, a senior undergraduate student at the University of Colorado worked for the Department five days a week for eight

weeks to earn laboratory credits to fill a student teaching requirement. He gave lessons and tours in the morning and catalogued slides in the afternoon. The Department was pleased with his work and hopes to begin using interns on a regular basis.

Funding

About 90 percent of the Society's annual operating budget of $500,000 is state-appropriated. The remainder comes from donations, membership fees, and sales. Approximately $66,000 is spent a year on education programs.

Between 1966 and 1969, approximately $10,000 was received from the U.S. Office of Education (money made available by Title III of the Elementary and Secondary Education Act of 1965) through the Denver Public Schools to support the development of Minority History lessons and Grandmother's Trunks.

Coordination With Schools

Museum Programs and the School Curriculum

Approximately 80 percent of students participating in history lessons and using Society loan materials are in the third, fourth, and fifth grades. Students at these levels study Colorado history and, in some cases, "minority history" with different school districts introducing the subjects at different grade levels.

Each year, an increasing number of Denver-area teachers are bringing classes to the Museum for more than one lesson, sometimes to take part in an entire series. During the 1971-72 school year, ninety classes participated in three or more lessons.

Development and Evaluation of Minority History Lessons

Minority History Lessons were begun in 1965 in cooperation with the Denver Public Schools, as part of a city-wide Title III program called "Improving Attitudes, Cultural Understanding, and the Opportunity for Achievement." The program involved, in addition to the museum lessons, related lessons in the class-

room, inter-ethnic exchanges among schools, closed circuit television shows, and other offerings around the City. The school system discontinued its part of the program in 1969. Since then, the lessons and the Grandmother's Trunks -- which were initiated in 1968 as extensions of the lessons -- have continued independently, supported wholly by Museum funds.

The Denver Public School System evaluated the City-wide program in 1968, using a written test given to fifth graders to determine how successful the program's components had been at teaching specific facts. The test showed that students who had taken part in the museum lessons knew considerably more about Colorado minority history than students who had not taken part and that the lessons were the program's single most effective means of imparting information. Presently the Museum's Curator of Formal Education is working to develop a method of measuring attitudinal changes brought about as a result of the lessons.

Scheduling and Distribution of Extension Materials

Teachers reserve extension materials by mail or phone, making arrangements either with the Museum directly or with one of twelve regional distributers (film libraries in large school districts where copies of films and kits have been placed.)

Requests received at the Museum are handled by the Assistant to the Curator of Formal Education who, before scheduling a loan, checks the request against a master file to determine if other teachers in the same town or school have requested the materials for near the same time. If such is the case, she telephones the teachers involved and arranges for them to share the materials. If there is no duplication, she finds a suitable date for the loan; records loan data on a card, which she places in the master file; enters the data in a scheduling book; sends the teacher a confirmation card; and fills out a mailing label, which she clips to the card in the master file.

Once a week, the Assistant to the Curator and the Museum Aide mail out materials requested for the following week and enter in the scheduling book the inventory number of each unit sent. Thus the Museum

maintains a current record of the exact locations of all loan materials -- a record that facilitates insurance claims in the event of damage or loss.

Informing Teachers

Workshops for Teachers. Workshops are held several times a year, at the request of school districts and universities, for the purpose of introducing teachers and student teachers to Museum lessons and loan materials. During the school year of 1971-72, three workshops were given to a total of seventy-five participants. A typical session lasts an hour and a half and includes a tour of the Museum and a demonstration of a Minority History Lesson.

Catalog. Most years a Catalog of School and Interpretive Services is sent at the beginning of the school year to the offices of all public schools in the State. In 1972, because there were no major program changes, a flier was sent instead and the catalog mailed only to individual teachers upon request.

Facilities

In addition to exhibits, the teaching exhibit room contains storage cabinets and trunks for holding tactile materials. An audiovisual unit, built into the center of the room's front wall, has sliding exhibit panels on either side, a rear screen slide projection unit, and a cassette recorder. Next to the teaching exhibit room is a storage room equipped with cabinets and open shelves for storing loan exhibits and audiovisual materials. Upstairs, in the Museum's first-floor galleries, storage cabinets built to fit beneath the diorama cases hold artifacts used in gallery lessons.

Publications

Catalog of School and Interpretive Services -- a twenty-two-page publication describing Historical Society education programs given both at the Museum and at historic sites. The catalog is revised periodically as program changes are made.

Teachers' Guides -- mimeographed accompaniments to "Case Histories" and "Grandmother's Trunks." Approximately eleven pages in length, the guides contain background information about the culture or period represented as well as explanatory comments about exhibit materials.

THE MUSEUM OF NEW MEXICO

Purpose:	To increase public understanding and appreciation of New Mexico's diverse cultural heritage.
Governing Authority:	State.
Location:	Headquarters in Santa Fe; monuments at five other locations.
Community served:	The State of New Mexico.
Year of Founding:	1909, by the Territorial Legislature of New Mexico.
Facilities:	An anthropology laboratory, an office building, and four exhibit buildings in Santa Fe. The exhibit buildings are the Palace of the Governors, the Hall of the Modern Indian, the Fine Arts Building, and the Museum of International Folk Art. The museum has additional facilities elsewhere in the State.
Collections:	Southwest history, prehistory, ethnology, and art; international folk art.
Education Programs:	In-house and extension program for children and adults are offered through an Education Division.
Education Staff:	Three full-time paid staff members and approximately forty volunteer docents.
Hours:	9:00 a.m. to 5:00 p.m., Tuesday through Saturday. From 2:00 p.m. to 5:00 p.m. on Sunday.

Admission: Free.

Attendance Approximately 500,000 visitors a year.

For further information, write to Mr. Michael J. Warner, Coordinator of Education, Museum of New Mexico, Santa Fe, New Mexico 87501.

THE MUSEUM OF NEW MEXICO

Through statewide programs, the Museum of New Mexico seeks to increase public understanding of its State's diverse cultural heritage. Since its founding in 1909, the Museum has grown from a single unit specializing in the anthropology of the Southwest to a "museum system" consisting of an anthropology laboratory and four exhibit buildings in Santa Fe and five historic monuments at other locations. The Santa Fe units of the Museum are the Fine Arts Building, where the works of New Mexican artists are displayed; the International Folk Art Building, with collections representing fifty countries; the Palace of the Governors; and the Hall of the Modern Indian.

Exhibits

The Palace of the Governors, built between 1610 and 1612, when New Mexico was a frontier outpost of the Spanish empire, was for nearly three centuries the major seat of government in the Southwest, becoming the first unit of the Museum in 1910. Today its rooms trace the development of New Mexico from prehistoric times to the early twentieth century. Favorite teaching exhibits include a miniature diorama of Tyuonyi, a Rio Grande pueblo of 1300-1540; a display of rugged household and farming tools used by early Spanish settlers; and a period room containing furnishings that might have belonged to a prosperous bourgeois family living in Santa Fe in the late nineteenth century.

A Docent Room, at one end of the Palace, holds exhibits for children. Here youngsters may use a grinding stone and pestle, admire a nineteenth century bicycle, examine a collection of ancient pottery shards and projectile points, talk into a pair of early telephones, and handle other exhibit materials. Most of the artifacts are stored in cases lining one wall of the room. Above the cases hang the five flags -- Spanish,

Mexican, New Mexican, Confederate, and United States -- flown over the Palace during its years as a seat of government.

The Hall of the Modern Indian, behind the Palace, contains actual-sized furnished models of a Navajo hogan and an Apache tepee as well as dioramas and artifact displays illustrating religious practices, means of subsistence, social and political organization and other aspects of Indian life in the Southwest during the first half of this century.

Programs Given in the Museum

Guided Tours

Tuesday through Friday, volunteer docents give free guided tours of the Museum, in the morning and the afternoon, to groups of children and adults. A tour may be of the Palace of the Governors and the Hall of the Modern Indian, of the Fine Arts Building, or of the Folk Art Building.

The tour of the Palace of the Governors and the Hall of the Modern Indian, which lasts ninety minutes and is the most popular of the three, outlines events and trends in New Mexico from late in the Pleistocene to early in the twentieth century, examines briefly the methods of anthropology, and compares Southwest Indian cultures of recent times. Docents avoid the use of dates and technical terms, seeing themselves as "introducers" to the pleasures of their subject and the fun of museums. Generally, the volunteers have a shared point of view in that they stress cultural relativism and point up frequently the contributions of the Indians and the Spanish.

Usually the program involves a visit to the Docent Room, where students handle artifacts and listen to an introductory talk, and a tour of main exhibit areas. The amount of time devoted

"Head Start" youngsters visit the Docent Room during a tour of the Palace of the Governors.

to these activities depends on the age of the students. Throughout the tour the approach of the docent is relaxed and conversational. She leads the children to an exhibit area and suggests they look around. When they have finished, she asks a few questions to determine if they understand what they have seen and answers any questions they might have. Then she goes on to the next area, being careful not to rush her group.

Extension Services

Traveling Exhibitions

A "School Traveling Exhibition Unit" and a "Community Traveling Exhibition Unit" make pre-scheduled visits each year to school and community centers throughout New Mexico.

The School Traveling Unit. The purpose of the "School Unit," which is housed in a thirty-five foot van trailer, is to give elementary school children living in remote areas the chance to experience quality museum exhibits. Over a two-year period, the exhibit spends a day at every public elementary school and every Bureau of Indian Affairs school in the State, visiting 389 public and thirty non-public schools with a total enrollment of approximately 151,000. Children tour the van a class at a time and usually see a short film before their visit. The tours last about ten minutes and are led by the unit's "Driver-Curator."

Exhibit themes, which change with every two-year cycle, are chosen for their relevance to New Mexico's largely rural population and often emphasize contributions of the Indians and the Spanish to the State's tri-cultural heritage. The current exhibit, "Horses and Horsemen in the Southwest," covers a 350-year period of Southwest history lasting from early Spanish contact to the present. The role of the horse and the life styles of horsemen -- conquistador, Indian warrier cowboy, and homesteader -- are examined through

paintings, photographs, slides, and examples of horsegear. Upon entering the exhibit, the student finds a full-scale cutaway model of a horse skull outfitted with a bit and reins. By pulling the reins, he can observe the working of the bit. Exhibit labels are written at a sixth-grade reading level:

> The Indian horseman made most of his own equipment. If he couldn't trade for a saddle, he made one. Twisted horsehair and braided rawhide made good ropes. Soft-tanned buckskin made good chaps.
>
> Navajo women wove beautiful cinch straps, saddle blankets, and serapes. Navajo blankets are still bought and used by people all over the West.
>
> The Indian horseman was proud of his horse and proud of the beautiful gear he had. When visiting other tribes, he wanted to look his best in order to bring credit to himself and his family.

Before visiting the exhibit, the children see one of two films -- the first for first-through-third graders; the second for fourth-graders and above. The second is narrated partly in English and partly in Spanish.

The Community Traveling Unit. The Community Traveling Exhibits, which change annually, are set up in schools, libraries, union halls, and other institutions. The exhibits are designed for a general audience and composed of photographs, paintings, and artifacts. Recent titles have been "Mountain Folk of the Southern Appalachians" and "Sculpture in the Southwest."

Each year the Community Exhibit visits thirty-three small population centers in remote areas of the State, spending a week during the fall, winter, and spring at each of thirty

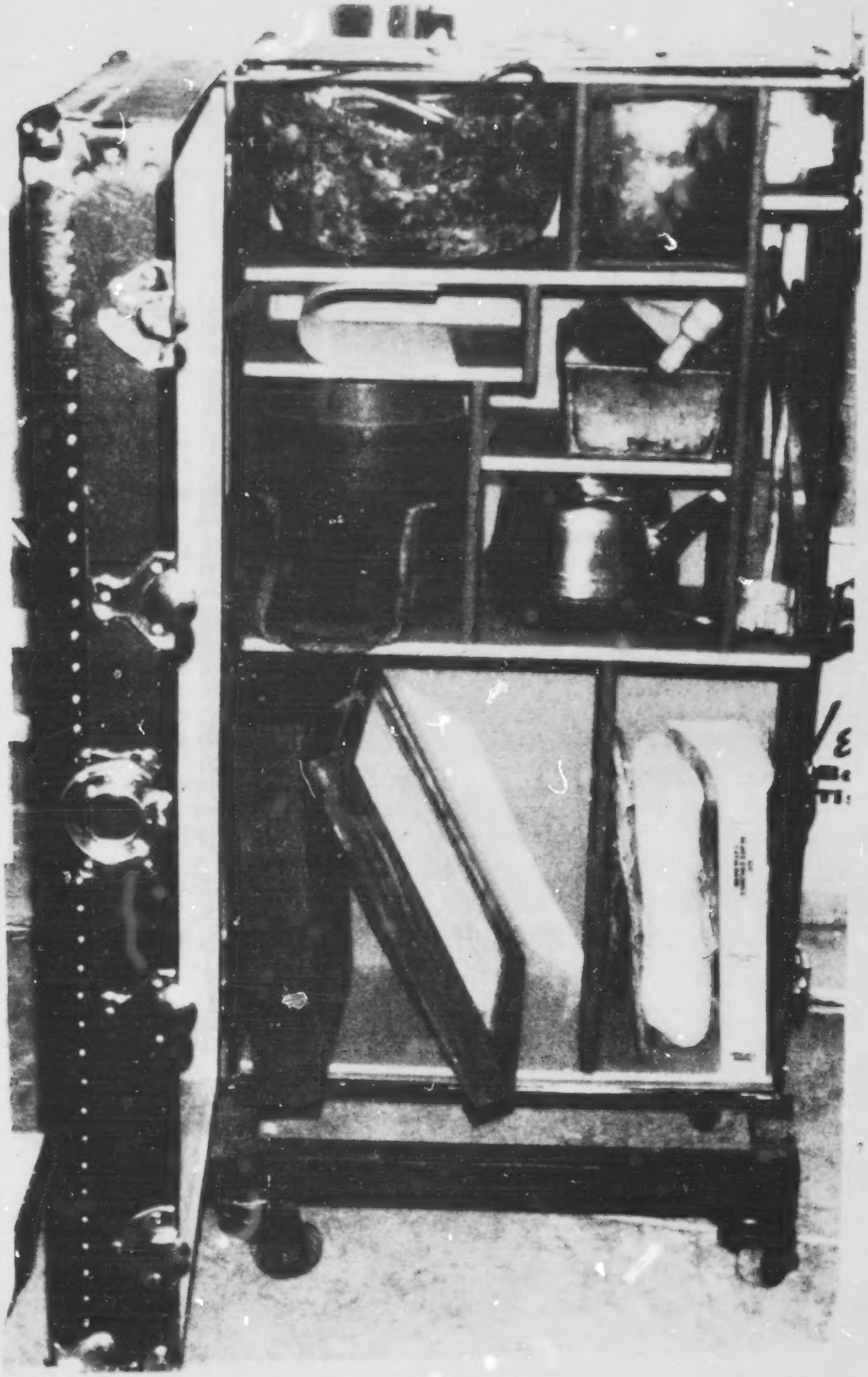
communities and several weeks during the summer at each of three tourist centers. A "Driver-Curator" is responsible for transporting and setting up the exhibits and for guiding visitors. Classes of school children are frequent participants in a program consisting of a short film followed by a twenty-minute tour of the exhibit area.

Suitcase Loan Exhibits

Recently the Museum developed four exhibit kits, which it loans to elementary schools for two-week periods. Each of the units deals with an aspect of the New Mexican tri-cultural heritage and contains three-dimensional materials dating from prehistoric times to the present. Accompanying the objects are photographs showing them in use, a resource booklet written by the State Department of Education on the teaching of New Mexican history, a teacher's guide prepared by the Museum, and information and "activity" cards for children to use as guides to independent projects. The exhibits are stored and shipped in upended, compartmented, felt-lined footlockers mounted on casters. Their subjects are "foods and cooking;" weaving, dyeing, woodcrafting, tincrafting, and candlemaking;" "pottery making, sand painting, adobe making, leather crafting and quilting;" and "clothing."

The Clothing Kit. In addition to teacher's guide, activity cards, and other supplementary materials, the clothing exhibit contains a large mirror, a selection of wearing apparel and jewelery, a Sears and Roebuck catalog, an assortment of fabric samples, and several cassette tapes of New Mexican folk tales and folk music.

The purpose of the exhibit is to develop in children positive attitudes about themselves and about the clothing and customs of New Mexico's three cultures. The teacher's guide outlines seventeen "group" and eleven "independent" activities planned with this end in view.



Suitcase loan exhibit

For the group activities, the children sit with their teacher in a circle on the floor. In one exercise, they take turns looking at themselves in the mirror, describing in a positive manner what they see. In another, they examine a mantilla, a buckskin jacket, and other pieces of clothing from the kit together with magazine pictures of contemporary uniformed workers and attempt to determine who wore the clothing and why.

The independent activities are carried out by individual children or by groups of two or three, with the youngsters following "activity cards" of their choosing. One of the cards gives instructions for making a simple loom and weaving a piece of cloth; another proposes the development of a bulletin board display of text and pictures showing how man's clothing has enabled him to venture into new environments.

The Museum urges teachers to allow students free access to the kit. Most of the artifacts are durable, replaceable, or both. Precautions have been taken with fragile, valuable, and very small items to prevent damage and loss. Fragile objects, such as a prehistoric Basketmaker sandal, and small ones have been encased in plastic "vu-boxes;" jewelry has been sewn to clothing.

Circulating Exhibitions

Circulating exhibitions of paintings and photographs are loaned for three-week periods to colleges, museums, libraries, and other nonprofit institutions in New Mexico and neighboring states. In the past, elementary and secondary schools have had very limited access to these exhibitions, but soon the situation will change with the development of several units expecially for schoolchildren.

The Museum reports that the first of these -- a New Mexican Santero Exhibit for children aged three to nine -- has been completed in cooperation

with a private contractor, the Southwest Cooperative Education Lab (known as SWCEL). The unit features a collection of religious images (santos) made by New Mexican folk artists (santeros) during the nineteenth and the twentieth centuries. Included are both carved, three-dimensional figures and flat paintings done on wooden slabs or animal skins. The artifacts are transported and displayed in labeled exhibit cases made to size. Accompanying the exhibit is a brief slide show; an "accessory kit" of tools and materials with which students can make copies of the artifacts; and a teacher's guide. The exhibit labels, which are written at an appropriate level in both English and Spanish, describe the santero's way of life and the socio-economic factors contributing to the rise and decline of his art.

The unit will be piloted and evaluated in three public schools in Albuquerque, New Mexico -- one predominately black, one mostly "Anglo," and one largely Spanish -- with each school keeping the unit for a month. A team of evaluators from SWCEL will use time-lapse photography to study student reactions and, at the end of the month, will assess the children's art work in an effort to determine if exposure to the exhibit has improved artistic quality. Possibly the team also will administer a test (yet to be designed) to indicate if aesthetic judgements have improved as a result of the exposure.

Portfolios

Presently under development are a series of "Portfolios" sold to schools for 60¢ apiece. Each of the units contains copies of approximately twelve photographs from the archives of the Museum's History Division, a sheet of annotations, a page of background information, and a bibliography. So far, two units, both suited to the upper elementary grades, have been completed. The titles are "Spanish Colonial Life in New Mexico" and "Fort Sumner and the Bosque Redondo."

Staff

With grant money made available for the purpose, an Education Division was established in July, 1972. Until then, individual staff members from several of the Museum's other divisions had been responsible for the programs described here, and a lack of coordination among these persons had been a problem. The staff of the new division includes a Coordinator of Education, a Curator of Education, a Secretary, and two Driver-Curators. This paid staff is supplemented by approximately forty volunteer docents.

The Coordinator of Education, who heads the Division, is responsible primarily for overseeing the development of new outreach programs and maintaining a working relationship with the State Board of Education and other educational institutions in the State. He works closely with the Curator of Education to plan and program new exhibits and serves as consultant to local museums seeking advice on program development. Formerly the Curator of Collections in the Museum's History Division and a teacher of history and literature at the high school and the college levels, he holds a B.A. and a M.A. in history and is completing a doctorate in history.

The Curator of Education, who has a Bachelor's degree in art and a Master's degree in anthropology, is concerned mainly with exhibit development. Before assuming her present job, she worked in several other museums, gaining experience in teaching, exhibit development, care of collections, and docent training.

The Driver-Curators are responsible for the traveling exhibition units. During the nine months of the year that the exhibits are on the road, the Driver-Curators act as drivers, maintenance and community liason men, and exhibit interpreters. The job is lonely and demanding, and finding well-suited people is a continual

problem. Former Peace Corps volunteers of both sexes have worked out well.

Docents

Backgrounds and duties. The docents, directed by a volunteer "Head Docent," are, in most cases, middle-aged housewives from the community. Four of the volunteers are retired men; a number, college graduates and former teachers. Because the Museum wants to keep the program open to people of all socio-economic levels, there are no educational requirements that a docent must meet.

Docents conduct tours in areas of their specialty and occasionally help to set up exhibits and to write "Exhibit Guides" (to be described). The Head Docent spends about fifteen hours a week during the school year scheduling and giving tours, writing a newsletter, planning docent training programs and field trips, and writing "Exhibit Guides."

Training. Each September, before the start of the tour season, Curators of the Museum's Fine Arts, Folk Art, and History Divisions conduct one or two morning-long training sessions apiece in their specialties for new and experienced docents. For two months or so following this initial series, new docents continue training by observing tours.

Every Monday during tour season, docents attend morning-long workshops featuring talks and demonstrations by specialists from the Museum and the community. At a recent workshop, the docents studied methods and tools used by prehistoric miners, first meeting with a curator at the Museum's Anthropology Laboratory to examine mining artifacts and then visiting a prehistoric mine site. At another session, they discussed pueblo politics with the governor of a nearby pueblo.

Funding

The Museum's annual operating budget as set by the State of New Mexico, is $850,000. Of this, $780,000 is state-appropriated. The remainder comes from grants, visitor donations, fund-raising events, and gift shop sales. The Museum of New Mexico Foundation, a non-profit, tax-exempt organization, supplements the budget set by the state with an annual contribution of $15,788.

Between $150,000 and $175,000 is spent a year on education programs. About $35,000 goes for school and community traveling exhibitions and $300 for the tour program. Traveling exhibition money is state-appropriated; school program money is provided by the Museum of New Mexico Foundation.

Recent expansion of school services has been made possible by three grants from the Weatherhead Foundation of New York City. The first grant -- $9,000 received in 1970 -- supported the production of the school loan kits. The second -- $28,000 received in 1972 -- made possible the hiring of the Coordinator of Education and the development of the santero project. The third -- for $11,000 -- will support the development of loan kits in 1973. Following the award of the second grant, the State offered the Museum an additional appropriation of $15,000 a year to maintain the position of Coordinator of Education after the grant period ends.

Coordination with Schools

Museum Programs and the School Curriculum

As the Museum expands its school services over the next few years, it will develop programs relating to specific classroom units at all grade levels. Presently, the programs for young people pertain in a general way to social studies units on New Mexican history, geography, government, and Indians, taught in grades one through six in State public schools.

Evaluation of Suitcase Loan Exhibit

The clothing exhibit, the first in the suitcase loan series to be completed, was piloted and evaluated in three Albuquerque public schools early in 1972. In the first school, where there was an open classroom situation with teachers working in teams, the exhibit was placed for one month and used by second, third, and fourth graders. In the other two schools, where classrooms were self-contained, it was placed for two-week periods and used by a third-grade class, in one case, and a fifth-grade class, in the other.

During each loan period, a team of evaluators made up of three graduate students in education from the University of Albuquerque -- one of whom was the developer of the kit -- spent approximately six hours in the classroom recording with cameras and on paper, student responses to the exhibit, examining exhibit-related projects, and interviewing teachers. The interviews were held at the beginning and the end of each loan period. In the first interview, teachers were asked how they planned to use the kit, if they thought the teacher's guide would be helpful, and if and how the exhibit would benefit their classes. In the second, they were asked to state their feelings about the kit, to describe how they had used it and student reaction to it, and to offer suggestions for improvement. Overall, the teacher response was highly favorable.

The evaluators found that in the third school, where the Museum had given the teacher personal instruction in using the kit, projects were of higher quality and student response to the materials more enthusiastic than in the first two schools, where teachers were not involved. The team recommended that workshops be held to train teachers in the use of the exhibit and that photographs be placed in the unit showing it in classroom use. The findings and recommendations of the evaluation are outlined in a written report submitted to the Museum in the spring of 1972.[1]

Training Teachers

During the summer of 1972, the graduate student who developed the suitcase loan exhibits, gave a workshop demonstrating use of the units with small groups of children in three schools. Between five and eight teachers attended each session.

Informing Teachers

In September, the Head Docent mails batches of mimeographed fliers announcing the tour program to all schools within a hundred-mile radius of Santa Fe. The envelopes are addressed to school secretaries, who are asked to distribute the announcements to teachers. Each announcement contains a brief description of exhibits, directions for making tour reservations, and a reservation form to be filled out by the teacher and mailed to the Museum at least two weeks before the desired tour date.

Upon receiving a tour reservation form, the Head Docent mails the teacher a notice of confirmation that includes, in addition to information about date and time of tour, class size, etc.,

[1]Shirley Cox, Vita Saavedra, and Suzanne Delaware. "Museum Educational Aids and Public Schools."

a map showing the locations of Museum buildings and a paragraph giving parking instructions for buses.

Teacher's Guides to the School Traveling Exhibition Unit are mailed several weeks in advance of the time the unit is scheduled to be in a school district to that district's Director of Instruction, who delivers them to school principals, who in turn are supposed to pass them on to teachers. Because this system occasionally breaks down, the Unit's Driver-Curator keeps a supply of extra guides on board for last-minute distribution.

Distribution of Suitcase Exhibits and Circulating Exhibitions

A method for the statewide distribution of suitcase loan exhibits and the santero exhibit has yet to be worked out. Possibly several copies will be made of each unit and the copies placed in regional distribution centers (libraries, other museums, etc.). Another possibility is that the units will be forwarded directly from one school district to the next in order to keep shipping costs to a minimum.

Scheduling of the School Traveling Exhibition Unit

At the beginning of the school year, the Secretary of the Education Division plans a district-by-district schedule for the School Traveling Exhibition Unit. During the school year, several weeks before the van is to visit a particular district, she telephones the district's Director of Instruction and arranges a tentative schedule with him. Subsequently, he meets with principals of the schools to be visited to determine if the schedule is agreeable to them. After he has notified the Secretary of the meeting's outcome, she revises the schedule if necessary and passes it on to the unit's Driver-Curator.

Facilities

The Docent Room accommodates up to sixty students. Glass-doored cupboards hold exhibit materials; folding camp stools provide seating.

The van trailer housing the School Traveling Exhibition Unit is a 1971 model, thirty-five feet long by eight feet wide and equipped with a power plant for heat and light.

Publications

Teacher's Guides -- booklets for teachers to use in preparing students for the School Traveling Exhibition. The guides contain background information, photographs of the exhibit, and an annotated bibliography. The guide to the exhibition, "Horses and Horsemen in the Southwest," includes also a poster.

Teacher's Manuals -- loose-leaf-bound guides to Suitcase Loan Exhibits. Illustrated with line drawings, the manuals contain approximately twenty-one pages of instructions for using the exhibit as well as activity suggestions.

Docent Newsletter -- a bi-monthly, five-to-six-page, mimeographed publication for docents, written by the Head Docent. Included are a calendar of events, brief articles, and sometimes suggested methods for giving tours.

Exhibit Guides -- research guides used by docents as references and containing in outline form information about exhibit content.

THE ARIZONA STATE MUSEUM

Purpose:	"To interpret the cultural heritage of Arizona, especially that of the native peoples, by preserving archeological and ethnological collections, by conducting research, by providing identification and informational services and by participating in the educational programs of the University of Arizona."[1]
Governing Authority:	The University of Arizona.
Location:	Tucson, Arizona.
Community Served:	The State of Arizona.
Year of Founding:	1893.
Collections:	Southwest archeology, ethnology, biology, mineralogy, and paleontology.
Facility:	A three-story building, built in 1935, and part of an adjacent Anthropology Building, constructed in 1961. Together these house storage areas, exhibits, laboratories, and offices.
Education Programs:	In-house and extension programs for children and adults, with full participation in the teaching programs of the University.
Education Staff:	One part-time paid staff member and approximately fourteen volunteer college students.

[1]Statement provided by the museum.

Hours: 10:00 a.m. to 5:00 p.m., Monday through Saturday.

Admission: Free.

Attendance: 67,249 in 1970-71.

For further information, write to Mrs. Susan Wilcox, Assistant Curator (Education), Arizona State Museum, The University of Arizona, Tucson, Arizona, 85721.

THE ARIZONA STATE MUSEUM

The Arizona State Museum, established in 1893, is one of the oldest divisions of the University of Arizona. Dedicated to interpreting the cultural history of the State and closely associated with the University's Department of Anthropology, the Museum occupies a tile-roofed brick building that has two floors of exhibit space.

Exhibits

First floor exhibits are arranged in alcoves in a rectangular main hall. A "teaching alcove" to your right as you enter the Museum, holds a casual placement of grinding stone and pestle, Congo drum, loom, and other objects used by visiting schoolchildren. Alcoves on either side of the hall contain exhibits devoted to Arizona Indians from prehistoric times to the present. Displays of particular interest include a Navajo sand painting accompanied by ceremonial objects; a case filled with kachina dolls, the brightly-painted carved wooden figures representing the spirits, gods, and revered ancestors of the Hopi Indian; and a life-size diorama of a Navajo woman weaving a blanket at a rough-hewn, vertical loom.

At the far end of the hall, behind a mummy from a desert burial, is a simulated stratification of Arizona's Ventana Cave, an archeological site revealing ten thousand years of nearly continuous human occupation. By studying the stratification, you can see from the position of tools and other artifacts that the generations living in the cave changed their means of livelihood over the centuries, from big game hunting, to gathering, to farming. Next to the stratification is a case filled with mammoth bones that have projectile points embedded in them, and next to the bones, a miniature diorama of early hunters spearing

a mammoth. In the center of the hall, the "tree ring method" of dating archeological materials is explained on cross-sections of redwood and yellow pine. Upstairs, on a second-floor balcony, are habitat groups illustrating the natural history of the Southwest and more exhibits about prehistoric Indians.

Programs Given in the Museum

On weekday mornings during the school year, hour-long "study tours" are given to class-sized groups of elementary schoolchildren. In 1971-72, there were 6,647 participants, about 80 percent of whom were fourth-graders.

The study tour program is based on the theory that children learn best in a problem-solving situation -- that a child is most likely to assimilate an idea or a piece of information if he's been led to "discover" it for himself. The purpose of the program, as stated by the young woman in charge, is "to use the materials of anthropology and natural history to communicate a bit of the excitement of asking questions, of finding something out on one's own, and using previous experience to direct the formulation of new questions and problems..."[2]

The university students who guide the tours work to convey two broad ideas: (1) that there are certain universal problems which people in different parts of the world solve in different ways and (2) that no culture exists entirely independently of other cultures. Within this framework, tour subject matter varies according to the interests of participants and guides.

Each tour begins with a fifteen-minute orientation designed to relax students and to

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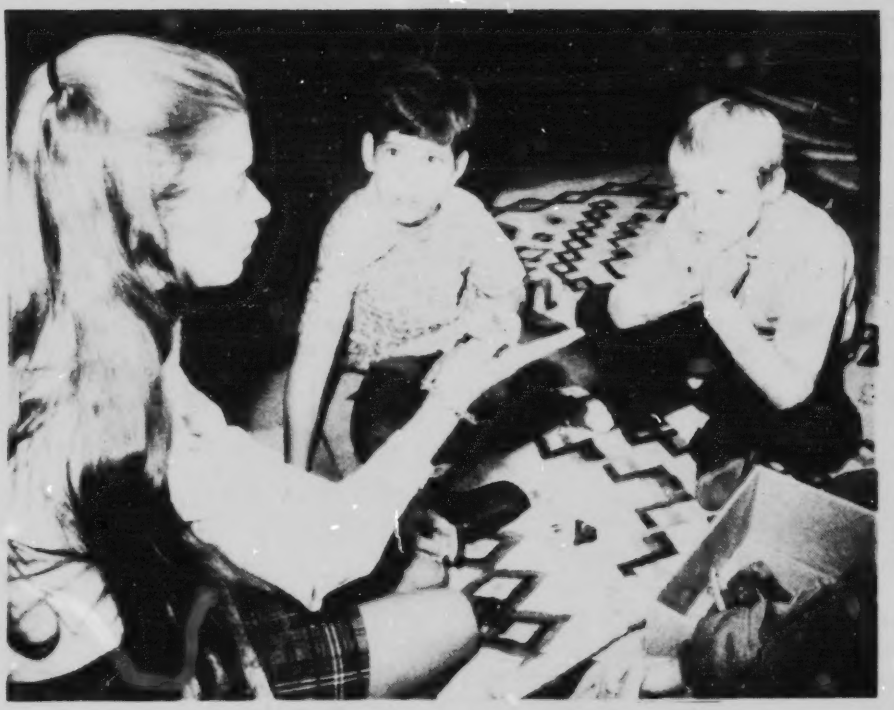
[2]Susan L. Furer (Wilcox), "The Arizona State Museum Guide Program: "What Do We Do With What We've Got", p.5.

help them with concepts that will be dealt with later in the morning and are difficult for most children in the elementary grades to grasp. This warm-up session, held in the teaching alcove, may concentrate on one of several themes: "cultural relativism," "mammoth hunting," "music," "bones," "time and space," or "contributions of the different peoples of the Southwest."

If "time and space" is the theme, the guide begins at the beginning of life, passing around small lumps of clay so the children can learn how fossils occur by making fossils of their own bodies. To give the children a sense of time, he invites one child to unwind a thousand-year "time reel" made of yards of water ski tow rope, tied in 1,000 knots with a red bow attached to every tenth knot (most of the youngsters are ten years old), out of the teaching alcove and around the exhibit hall. Then using a globe, he traces the migratory routes of early man, showing, finally, how man came to what is now the American Southwest.

When music is the theme, he conducts a "jam session" in which everyone participates by banging away with wooden sticks on coffee cans plastic oatmeal boxes, and popcorn cans; plays a tape recording of a Congolese rowing chant while the children listen and try to identify the activity the chant accompanies; and brings out an ensemble of Apache musical instruments, demonstrates their sounds, and then plays a recording of Apache music in which the youngsters attempt to find the sounds of the instruments they've just heard demonstrated -- the point of the exercise being that music is a universal experience.

Following the orientation, a class is divided in groups of five or six; and each group, with its guide, starts out in a different part of the Museum. Exhibits are visited in no particular order. A guide might begin upstairs in the natural history section, talking about



A study tour

adaptations and evolutionary processes; go downstairs to Ventana Cave to discuss the interrelationships between tool using and mental development and the significance of a stratified site; stop at the mammoth bones, the mammoth hunters, and the mummy; and climb upstairs to the three dioramas on hunting, gathering, and farming before proceeding downstairs again to the Hopi and Navajo exhibits and ending in the teaching alcove with an exercise in corn grinding or weaving.

Methods. Throughout the tour, the guide is continually asking questions, posing problems: "From looking at the mammoth's teeth, what do you think he ate?" ... "Where's the evidence that Indians killed this mammoth?" ... "If we were to dress these men (the mammoth hunters) in business suits and put them in downtown Tucson, would they look any different from us?"... "Are people animals?" ... "What kind?" ... "How would you make a blanket if you were a Navajo and couldn't buy yarn?" The children follow along, absorbed and thinking hard, afraid of giving a wrong answer at first, but increasingly relaxed and responsive as the tour progresses.

In explaining concepts, the guide avoids the use of technical terms, phrasing explanations in words the children use in everyday speech -- he defines "natural selection," for example, as nature "kicking out" plants and animals that haven't the "right" mutations. Frequently he draws analogies, comparing what happens to a mummy during mummification to what happens to an orange drying up in a back yard, and the Hopi's fearsome "Ogre Kachina" to the bogeyman, or, if students are of Mexican descent, to La Llorona, the "weeping lady" of Mexican folklore.

Extension Services

Multi-Media Kits

The Museum has developed trial versions of three multi-media kits -- one on Papago

Indians, one on Hopi Indians, and one on archeology -- which it loans free for one-week periods to schools in the Tucson area. Used by teachers of all grade levels, the kits contain museum objects, teachers' guides, books and booklets to be read by children, and photographs and drawings showing objects in use. Eventually, the units will include slide collections and tape recordings. Six additional kits are being developed.

The Hopi Kit, which contains objects representing a time span of about five hundred years, is based on an eighteen-page illustrated narrative on the modern Hopi, that explains, at approximately a fourth-grade reading level, Hopi technology, religious beliefs, and customs. Among the eighteen objects (artifacts and raw materials) in the kit, are a plaited basket used for sifting cornmeal, a Kachina doll, a silver box, a woolen sash, a bundle of Yucca leaves, and an ear of corn. The Hopi teacher's guide has a bibliography, an evaluation form, four pages of suggestions for using kit materials, and the reprint of an article by anthropologist, Frederick O. Gearing, explaining why it is important for students to study Indian life. (Dr. Gearing feels, and the Museum concurs, that students can benefit in two ways from such study -- they can learn to see the sense in unfamiliar forms of culturally-patterned behavior, and they can increase their understanding of their own society through direct comparison with another.)[3]

Loan kits, like study tours, explain concepts in non-technical terms that relate to the child personally. For example, the narrative in the Hopi kit contains the following passage:

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3. Frederick O. Gearing, "Why Indians?", Social Education 32 (1968): 130-136.

> Hopi women used to make a lot of pottery to store food and water in. Some of the jars were very big, and they were good for keeping water cool. Some of the water in the pot leaks out through very small holes (they are so small that you would need a microscope to see them) in the clay. This water evaporates when air blows across it, and this makes the outside of the pot cooler. You can understand how this works if you think about jumping into a swimming pool; when you get out, your skin is wet, and you feel cool if a breeze blows. You are getting cool the way the water in the pottery jar is.[4]

Other Loan Materials

The Museum makes available to schools in Tucson's District One, a variety of loan exhibits relating to history, natural history, and anthropology. Developed and maintained by the Junior League of Tucson, the exhibits are of three types: dioramas, "displays" (plexiglass-fronted boxes containing artifacts), and "materials to be handled." In addition to these, the Museum loans specially-assembled collections to individual teachers on request.

Classroom Lessons

Several times a month, the Museum's Assistant Curator (Education) gives classroom lessons, based on exhibit materials, to schools in the Tucson area. Many of the lessons are on the subject of "archeology as a career" and given in connection with a county-wide career development program that sends practitioners of a variety of occupations to classrooms to talk to students of all grade levels. Other lessons may be on a particular Southwest Indian culture

[4] Susan Wilcox, "The Hopi," p.5.

or on prehistoric man. The programs last anywhere from fifteen minutes to two hours. For the archeology lesson, the Assistant Curator (Education) dresses as she would for a dig, in old jeans and a T-shirt, and carries in her pockets, strings, band-aids, a line level, and other supples, pulling forth appropriate articles as she talks about the purposes and methods of her profession.

Often a lesson is given as an introduction or a follow-up to a museum tour. Frequently concerned with subjects covered by multi-media kits, the lessons are a convenient mode of testing kit materials.

Staff

An Assistant Curator (Education) is responsible for the programs just described. Working under her are approximately fourteen volunteer guides.

The Assistant Curator (Education) has a Master's degree in anthropology and is employed three-quarter's time. She recruits, hires, and trains guides, conducts study tours and classroom lessons; and develops lessons, tours, and kits. Now a regular Museum employee, she began her job on a graduate assistantship.

Guides

The guides are graduate and undergraduate students in anthropology at the University of Arizona. Of the thirteen now working for the program, nine are earning "independent study" credits.

The students are recruited through posters placed in the University's Anthropology Building and through a newsletter published by the University's Anthropology club. They are "hired" at the beginning of each semester. Because there usually

are more applicants than spaces for guides, the Assistant Curator (Education) can be somewhat selective in hiring, accepting only upper-level students and choosing those who seem to be the most enthusiastic.

Guides work either three or six hours a week. All conduct study tours and are required to do a special project, such as the development of a program. Some help to give classroom lessons. All find that guiding helps them with their course work because it requires that they clarify their thinking.

Training. At the beginning of each semester, the Assistant Curator (Education) takes new guides through the Museum, singly or in pairs, to familiarize them with the exhibits. As she does so, she discusses concepts with them, attempting to lead them to discover weaknesses in their thinking and holes in their knowledge. After the guides have been oriented, a general meeting is held at which questions are answered and small practical matters dealt with. As part of their training, guides read How Children Learn and How Children Fail by John Holt, On Knowing by Jerome Bruner, Open Classroom by Herbert Kohl, and two articles by the Assistant Curator (Education) to be described.

Most of the guides relate easily and naturally to children, and because they know their subject well, are unafraid of questions and unlikely to hand out misinformation. During the early weeks of their guiding, the Assistant Curator (Education) follows them about continually, listening to their talks. After their tours, she points out mistakes and things done well and makes suggestions for improvement.

Funding

The Museum's basic annual operating budget of approximately $260,000 is state-appropriated. Additional money is received from government

grants and from contracts with the National Park Service and the Arizona Highway Department.

The position of Assistant Curator (Education) is not written into the budget, but the education program receives about 1/3 of the wage funds in the operating budget and support services as needed.

Coordination with Schools

Museum Programs and the School Curriculum

All fourth-graders from Tucson's School District One take part in the Study Tours each year in connection with a year-long course of classroom study on Arizona. Also participating frequently are fourth graders from other Tucson-area districts and area third, fifth, and sixth graders studying units on "maps and globes," "American history," and "world history."

The Museum's multi-media loan kits are used by all grade levels. Accompanying each unit is an "evaluation form" asking the teacher to indicate how she used the kit and in connection with what classroom subject, whether any parts of the unit were too difficult for the children, what supplementary materials were used, and what materials she would like to see added. After a year of classroom testing, the units will be revised and put in final form.

Informing Teachers

The Museum is beginning a series of teachers' workshops, the first of which will be attended by five or six selected teachers and will attempt to determine what kind of large-scale workshop program teachers would find useful. Plans for future workshops will be based on the findings of the first.

Scheduling Tours

All Monday, Wednesday, and Friday study tour appointments are set aside for School District One fourth graders and scheduled by the District's Intermediate Supervisor, who sends the Museum, at the beginning of the school year, a copy of the schedule he has worked out. Other tours are scheduled by the Museum. When a teacher calls in, a receptionist arranges the appointment, writing down the teacher's name and telephone number. Later, at a convenient time, the Assistant Curator (Education) phones the teacher to discuss tour content.

Facilities

Supplies are stored in the teaching alcove. A glass-doored cupboard there holds changing exhibits of anthropological materials, and closed cupboards contain audiovisual materials and tactile artifacts.

Publications

The Arizona State Museum Guide Program: What Do We Do With What We've Got? --a twelve-page paper by the Museum's Assistant Curator (Education) expressing her view of the role of museums, in general, and the Arizona State Museum, in particular, in educating the young.

"The Arizona State Museum Guide Program" -- an article on the same subject as the above, published in the 1971-72 edition of Atlatl, the magazine of the University of Arizona's Anthropology Club.

Teacher's Guides -- materials accompanying multimedia kits. Not yet in final form, the guides include bibliographies, suggestions for using the kits, and lists of kit materials.

THE OAKLAND MUSEUM

Purpose: "To tell the unique story of California, depict the changing face of her land, and celebrate the creative energies of her people." [1]

Governing Authority: Municipal.

Location: Downtown Oakland, California.

Community served: The San Francisco Bay Area.

Year of Founding: 1969. The Museum comprises three earlier Oakland museums -- The Oakland Public Museum, founded in 1910; The Oakland Art Museum, founded in 1916; and The Snow Museum of Natural History, founded in 1922.

Facility: A three-tiered building, whose grounds and terraced roof gardens combine to form a park. In addition to exhibit galleries, the building has a theatre, a lecture hall, a classroom, a restaurant, a museum store, a collector's gallery, and a parking garage.

Collections: California history, art, and natural science.

Education Programs: In-house and extension programs for children and adults are offered through a Special Exhibits and Education Department and a Docent Council.

Education Staff: Four paid staff members, one elementary teacher from the Oakland Public School District staff, and approximately 500 volunteer docents.

Hours: Tuesday through Sunday from 10 a.m. to 5 p.m., Friday until 10 p.m.

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1. Statement provided by the Museum.

Admission: Free.

Attendance: Approximately 1,000,000 visitors a year.

For further information, write to Mr. Ben Hazard, Curator of Special Exhibits and Education , the Oakland Museum, Oakland, California 94607.

THE OAKLAND MUSEUM

The Oakland Museum in downtown Oakland, California, tells the story of its state through exhibits in art, history, and the natural sciences. The grounds and terraced roof gardens of the Museum combine to form a park. Garden terraces planted with a variety of ground covers, flowering shrubs, ferns, and espaliers may be entered from any of three gallery levels.

Exhibits

A Hall of California History, occupying the middle gallery level, presents its subject in three "cultural phases." An "Indian Phase" is represented by tools, ceremonial objects, and other artifacts traditionally used by California's native peoples; a "Spanish-Mexican phase" is highlighted by examples of religious art created by the Indians under Spanish tutelage and by an exhibit of rugged rancho furnishings; and an "American phase," lasting from the Gold Rush era to the turn of the century, features two authentic period rooms -- a rustic kitchen from the Sierra mining town of Rough and Ready and an 1853 Assay Office. A "transportation platform," with a gleaming pumper engine used in fighting the 1906 fire in San Francisco, serves as a transition to the twentieth-century part of the Hall, which is presently under development. Throughout the gallery, overhead banners present thought-provoking quotations: "We rejoiced to find so many pagans upon whom the light of our holy faith was about to dawn" -- Father Francisco Palou, 1782... "There is no easy work about mining...it makes a man feel old in the morning." -- letter from Long Bar, 1856...and "All civilizations are man-made, but California's is more man-made than most." -- Carey McWilliams.

A Hall of California Ecology, on the lower gallery level, takes the visitor on a simulated journey across California from the Pacific Coast to the high Sierra, showing the interrelationships among plants and animals living in the State's eight biotic zones.

On the Museum's upper level is a Gallery of California Art containing works by California artists and by artists dealing with California themes and subjects. The major part of the collection is arranged in chronological order, from the sixteenth century to the present. Also on the upper level are three smaller galleries -- a special exhibition gallery for temporary exhibits, a multi-media installation of two permanent shows, and an exhibition and study area devoted to prints and photography.

Programs Given in the Museum

Interdisciplinary Study Program

An "Interdisciplinary Study Program" for fifth graders from the Oakland Public Schools brings a different class of approximately thirty youngsters to the Museum every week during the school year. The purpose of the program, as stated by the Museum, is to lead students to see the importance of learning from the "three-dimensional and graphic elements of their environment." Each class, accompanied by a teacher and a teacher's aid, spends four successive school days in the Museum engaged in activities planned by a "project teacher" from the Oakland School District Staff, who supervises the program. About an hour a day is devoted to each of the three main galleries.

The youngsters begin their gallery work at 9:15 a.m., before the Museum is open to the public. As a rule, they work in pairs, following assignment sheets. Later in the morning, when the exhibit areas are crowded with tour groups, the students work in the Museum's classroom or out-of-doors, in its courtyard and on its terraces, continuing with assignments, singing folk songs, and playing pioneer games. After lunch in a nearby park, they return to the galleries, where they remain until the end of the school day. The role of the classroom teacher is to maintain discipline and to help children needing assistance. The project teacher provides added help and corrects assignments.

Interdisciplinary study program participants explore the Hall of California Ecology.

For their first assignment in the history gallery, students often work in the Indian section, pretending to be invaders from outer space reporting observations on Indian life back to a home planet. Sometimes as an alternate assignment, they build a "time machine" (a sculpture of used household utensils, toys, and other objects representative of the present day) and use the creation as a point of departure for traveling back in history to observe events in another era. Both exercises help to develop an understanding of the relationship between museum artifacts and the people who produce the objects.

For a subsequent history assignment, the children work at identifying artifacts, first handling a collection of some twenty objects, which includes such diverse items as an acorn mush bowl, a piece of decorative molding from a Victorian house, and a sinker stone used by Indians for weighting nets; then taking drawings of the objects into the gallery and attempting to find the exhibits to which the items relate; and finally, coming together and trying to place the materials in proper sequence on a paper "time line." In the process of the exercise, the students gain a historical perspective and an understanding of the relationships between exhibit materials.

Activities in the art gallery are primarily exercises in art appreciation; assignments in the natural history gallery deal with the concept of biomes.

Often teachers give follow-up assignments in an effort to extend the museum experience to the school classroom. Students have made graphs to show the popularity of art gallery paintings studied; planned the unfinished portion of the history gallery; built time machines; and developed classroom exhibits.

Gallery Tour

Tuesday through Sunday, in the morning and the afternoon, volunteer docents staff the galleries and conduct pre-arranged group tours. The tours are free to groups coming from inside the City of Oakland; for out-of-city groups there is a charge

of $10. Docents give also unscheduled tours on weekday afternoons and during regular hours on Saturday and Sunday.

During the school year of 1971-72, 82,718 visitors participated in guided tours. Approximately 2/3 of those participating were schoolchildren, about 1/2 of whom were fourth and fifth graders. The scheduled tours are of two types: those focusing on one of the Museum's three main galleries and those concentrating on a single theme that can be traced through all three. The latter are called "interdivisional tours." The tour of the History Gallery and one interdivisional tour are described here.

The Tour of the History Gallery develops the theme, "the history of man in California." When given to schoolchildren, the program lasts about forty-five minutes. One docent is provided for every ten to fifteen students. During the tour period, as many as ninety students may be in the Gallery at one time.

To avoid overcrowding of exhibit areas, the docents stagger their tours, starting out at intervals several minutes apart. A typical tour discusses the traditional way of life of California's native Indian peoples, the period of Spanish exploration and colonization, the coming of American traders and explorers, the Gold Rush era, and the Victorian period. A collection of tactile objects, carried in a small bandana-lined basket called a "Nancy Basket," is presented at some time during the program.

"California: the Quest for Gold" is one of three interdivisional tours offered. The program lasts an hour and covers selected exhibits in each of the Museum's three main galleries. In the Natural Science Gallery, students identify the kinds of rocks and land formations in which gold is found and discuss the effect of mining on the natural environment; in the History Gallery, they talk about the people who took part in the Gold Rush and about methods used in obtaining and analyzing gold; and in the Art Gallery, they view paintings of Gold Rush scenes. During the natural science and history portions of the tour, the children handle raw mineral samples, a mining pan, and prospecting core samples.

Methods. Because teaching styles vary among the docents, it is difficult to generalize about methods used. The following interpretive rules are followed by individual history docents at the Oakland Museum.

-- "Establish rapport at the beginning of the tour by asking students where they are from, what they are studying, how much time they have, and if they plan to visit another gallery."

-- "Proceed from the concrete to the abstract, making sure the children's eyes are focused on exhibit materials before you discuss concepts."

-- "Vary the tone of your voice and the pace of your tour."

-- "At the end of the tour, when you reach the unfinished portion of the History Gallery, ask the students what materials they would put in the twentieth-century exhibit section if they were planning the displays."

Programs Relating to Special Exhibits

Exhibits devoted to the cultural traditions of ethnic minority groups living in the San Francisco Bay area are sponsored several times a year by the Museum's Special Exhibits and Education Department. Each exhibit runs for about a month and begins with a week-long festival planned by members of the ethnic group represented. The festivals feature fashion shows, dance programs, craft demonstrations, and food. Recent exhibits have been "Indian Powwow," "Black History Week," "Mine Okubo" (the showing of the works of a Japanese-American artist), and "Black Soul Vibrations." Catalogues for the shows are used by high school teachers as supplements to social studies texts.

A Children's Collection for 2069 A.D.

Another type of special exhibit, "A Children's Collection for 2069 A.D.," was organized in 1969 by the docents and curatorial staff of the History Department. The exhibit was of objects donated by

sixth and eighth graders from nine urban and suburban school districts in the Oakland area -- everyday items relating to the theme, "Work, Family, and Play," which the children saw as symbolic of the contemporary scene. The purpose of the project, which the Museum plans to repeat at approximately five-year intervals, was to lead the children to an understanding of the Museum's role as collector and preserver and to heighten their awareness of their environment. The objects and the children's tape-recorded comments regarding them have become a permanent part of the Museum's collections.

Extension Services

The Museum on Wheels Program

It is reported that a Museum on Wheels containing both built-in and portable exhibits soon will begin traveling to elementary schools throughout the City of Oakland and to City hospitals and community centers. The continuation of an earlier traveling exhibit program halted temporarily in June, 1971, the Museum on Wheels will illustrate the theme, "The Changing Faces of the Bay Area," with materials from the main Museum's three divisions (Art, History, and Natural Science). Included will be many objects for children to handle. Two days will be spent at each school with three volunteer docents accompanying the unit on each visit. Portable exhibits traveling with the van will be available for loan to the schools for extended periods. Children will receive "I've seen the Museum on Wheels" badges as souvenirs of their visits. Many of the schools to be reached by the van are in low-income neighborhoods, where youngsters are unable to visit the main Museum because of a lack of school transportation funds.

The Museum on Wheels program began in 1969, when a large truck trailer was donated to the Museum and converted for use as a traveling exhibit van. The program was discontinued when problems developed with the trailer, which proved to be too wide to negotiate certain areas of the City. During the period when the program was not in operation, the energies of Museum staff members and a special committee of the Museum's Docent Council were

concentrated on acquiring a new van, re-designing the unit's interior, and developing a new exhibit program.

The Children's Museum Project

The Museum has placed a series of exhibits in three "pod" areas of Oakland's Martin Luther King Elementary School for the school year of 1972-73. The exhibits constitute a pilot "Children's Museum" -- the first in a series of small school-based museums planned for the entire City of Oakland.

Designed to augment the curriculum of kindergarten through third grade, the displays are of artifacts, natural science specimens, and examples of California art drawn from the storage collections of the Museum and from other institutions in the City. The materials are displayed in child-height cases built by parents of students at the school. In addition to items in the cases, there are animals and plants brought in by the children and an assortment of tactile objects. Other exhibit materials are housed in the school's multi-media resource Center for teachers and students to borrow for classroom use.

Exhibits change throughout the school year with the curriculum. Themes include "Our Community, the Bay Area," "Plants, Their Importance in Our Environment," and "Dolls from Around the World."

Filmstrip Program

In 1971-72, docents in art, history, and the natural sciences produced three fifteen-minute filmstrips to introduce elementary school pupils to the Museum's three main galleries. Each presentation concentrates on a single gallery and is accompanied by a taped narration and a written script. The packages have been distributed free to elementary schools in ten Bay Area counties. Soon Spanish and Chinese translations of the scripts and tapes will be given to schools with large groups of children whose first language is Spanish or Chinese. When money is available, scripts will be written also for high school students and adults.

Staff

A Special Exhibits and Education Department and a Docent Council are responsible for the programs described.

Special Exhibits and Education Department staff positions include a Curator for Special Exhibits and Education, a Curatorial Assistant, and a Secretary. To augment these positions, funding has been provided under the Emergency Employment Act for one Curatorial Assistant and one Research Assistant.

The Curator is responsible for the selection, training, and supervision of the Department's staff and for the overall planning, budgeting, and execution of the education programs.

The Assistant for Cultural and Ethnic Affairs assists the Curator in the planning and development of special exhibits and education programs that relate to minority groups.

Curatorial and Research Assistants receive, catalogue, and prepare exhibit materials; conduct research; handle correspondence; and insure that schedules and deadlines are adhered to.

During 1972, three volunteer staff assistants worked with the Department in conjunction with graduate field studies programs at Stanford University and the University of California at Berkeley. The students were assigned to projects of editing, proposal writing and catalog preparation and helped to plan special exhibits and programs.

The Docents

Backgrounds and Duties. The Museum's approximately five hundred volunteer docents are men and (mostly) women, most of whom are college-educated. About 20 percent are former teachers.

Docents plan and conduct scheduled and unscheduled tours for children and adults, Museum on Wheels programs, and in-service training programs for teachers. They also initiate and carry out research projects, develop teaching materials, and help to train fellow docents.

Each is required to give at least two half days of service a month to the Museum.

Organization. All docents are members of the Oakland Museum Docent Council, a volunteer service organization sponsored by the Museum's auxiliary, the Oakland Museum Association (OMA). A Docent Coordinator, a paid employee of the OMA, schedules tours and handles other operational details.

The Docent Council has three divisions -- Art, History and Natural Sciences -- which correspond to the Divisions of the Museum. The Council is administered by a Board of Representatives and holds several general meetings a year. The Council's work is carried out through committees, which include an Executive Committee, a Nominating Committee, a Finance Committee, and an Interview and Training Committee.

Recruitment and Training. Prospective docents learn of the docent program through friends who are docents and through notices placed in local newspapers. The women are screened by interviews with members of the Interview and Training Committee. All new docents pay a $45 training fee and are expected to join the OMA.

Docents must complete an initial training program requiring two undergraduate semesters taught at a nearby college and an additional training period, of six to nine months, taught in the Museum. For History Docents, the undergraduate semesters are in California history and in-house sessions consist of a minimum of eighteen three-hour sessions. A typical museum session for History Docents includes an hour-long lecture by a curator or a special speaker; a "gallery presentation," for which a curatorial staff member identifies objects in exhibits; demonstrations of tour techniques by experienced docents; and a discussion period.

Docents receive bibliographies and lecture outlines for use during and after training and may borrow from a "Docent Library," which houses a collection of books (including both elementary and college-level texts), tape-recorded lectures, and research papers.

As with other Museum docents, the training of a history docent is a continual process. It involves field trips to historical societies, archives, state interpretive centers, and other museums; sessions promoting the use of "Nancy Baskets;" gallery lectures by the curatorial staff; and special research projects.

Projects by "research study groups" are an important part of continuing training. In 1971-72, sixty of the History Division's 169 docents were engaged in such projects, each of which entailed research into a particular exhibit case or a specific aspect of California history. The women recorded their findings in a card file, which is used as a reference by all docents in the Division, and gave thirty-minute talks summarizing their findings to their colleagues. In a related project, some of the women developed the inter-divisional tours described previously. Current research will result in new tours focusing on particular themes such as "The Women's Role in California History," "Water: California's Gold," and "Voices of California" (famous people) -- tours that will be suitable for returning visitors. The main purpose of the research study program is to help docents gain a thorough knowledge of subject matter, enabling them to be flexible and answer questions easily and accurately; another purpose is to give experienced docents a new challenge.

Funding

The Museum is funded by the City of Oakland. An auxiliary organization, the Oakland Museum Association, provides added support with money received from the community and from foundations. The City budget allocates over $1,500,000 a year for general operating expenses. Funds from the Association -- amounting to more than $3,000,000 since 1968 -- have been devoted to acquisitions, special projects, and volunteer programs. During 1972-73, the Association budgeted $14,400 to support the docent program.

Recent gifts benefiting the Museum's education program include $4,297 from the Oakland Rotary Club toward the purchase of the Museum on Wheels trailer; $300 from the Alta Mira Club of San Leandro and $500 from the Benefit Guild of the East Bay for the Production of "I've Seen the Museum on Wheels" buttons; and a recent grant of $25,000 from the Merrill Trust Fund for the improvement of the Museum on Wheels project.

Coordination With Schools

Museum Programs and the School Curriculum

Guided tour programs and Museum on Wheels programs complement classroom subjects taught in the fourth and fifth grades in Bay area schools. To ensure that the programs relate to the school curriculum, docents confer with teachers and school administrators and examine curriculum guides and social studies texts used in the schools. In planning the programs, the women select for emphasis tactile objects which students have seen pictured in their school textbooks.

Development of the Interdisciplinary Study Program

At the request of the Oakland School District, the Museum's Interdisciplinary Study Program for fifth-graders was organized in the fall of 1971. A committee of ten representatives, five from the school district and five from the Museum, drew up the initial plan for the program.

School representatives included the Associate Superintendent for Educational Development and Services, the Curriculum Coordinator, a reading consultant, a reading development specialist, and a classroom teacher. Museum representatives included the Director of the Museum, the Curator of Special Exhibits and Education, the Executive Secretary of the Oakland Museum Association, the Curator in charge of the History Division, and the chairman of the Docent Council Education Committee.

The program was tested between January and July, 1971, with the present "project teacher" conducting the classes. Twelve classes of fourth, fifth, and sixth grade students took part in the pilot program during the school year; and thirty students from the seventh and eighth grades participated during the summer. At the end of the pilot period, teachers of participating classes were asked to indicate on a brief questionnaire whether their students had enjoyed the experience and benefited from it. The response was affirmative.

During the 1971-72 school year, the program was offered on a regular basis to fifth-grade classes. Lessons for each class were planned jointly by the classroom teacher and the project teacher. Transportation to the Museum was by car pool and public transit. At the end of the school year, teachers were again asked to complete a questionnaire. As before, teacher response to the program was favorable.

Development of the Children's Museum Project

The Children's Museum Project, in operation at this writing, was organized jointly by the Museum and Oakland's Martin Luther King Elementary School. The Museum staff designed the exhibits with the help of curriculum outlines provided by teachers, acquired artifacts, and conducted orientation sessions for participating teachers. At the end of the school year, the Museum will ask the teachers to evaluate the program. If the evaluation is favorable, the Museum will sponsor a series of orientation workshops for teachers from other inner-city schools to encourage the further development of Children's Museums.

The Museum hopes that the Children's Museums will become self-perpetuating, with the Oakland Museum providing technical support and assistance in identifying potential sources of artifacts and the schools cooperating in the design of exhibits, the acquisition of artifacts, and the training of teachers.

Training Teachers

In-Service Program. The Docent Council and the staff of the Museum offer an In-Service Training Program to acquaint teachers with the Museum's school programs. Teachers receive credit from their school districts for taking part. So far, the program has been given twice -- once in the fall of 1970 and

again in the fall of 1972.

The 1972 program consisted of seven sessions held on Thursday afternoons between four and six. The first session provided an introduction to the Museum through a series of brief talks by members of the staff and a slide lecture. The following three sessions were devoted to each of the main galleries in succession. Each session included the showing of one of the film-strips described previously and a docent-led gallery tour illustrating techniques used on school tours. The fifth session introduced the Museum on Wheels and the Interdisciplinary Study programs; the sixth featured a behind-the-scenes tour; and the final session reviewed the programs presented earlier, ending with a discussion period. Thirty-four teachers took part in the program, with twelve completing the series.

Informing Teachers

Letters sent by the Docent Coordinator during the summer to every public and most private and parochial schools in northern California announce the Museum's tour program for the coming year and give instructions for scheduling tours.

Fliers sent to all fifth-grade teachers in the City of Oakland describe the Interdisciplinary Study Program and give instructions for making program reservations.

Letters sent to superintendents of all school districts in the San Francisco Bay area and an entry in a school-produced handbook presented to teachers at the beginning of the school year publicize in-service training sessions.

Scheduling Programs

Teachers make appointments for guided tours by telephoning or writing to the Docent Coordinator. Reservations are accepted from Oakland Teachers starting in May of the school year previous to the one for which the reservation is desired and from out-of-district teachers beginning in October of the same school year for which the reservation is desired.

Upon making a reservation, the Docent Coordinator records it, sends a notice of confirmation to the teacher, and files a "tour request" form in the docent office for the information of the docent assigned to the tour. The confirmation and the tour request forms state the subject matter requested, the date and time of the tour, the size and grade level of the group, the name of the teacher, and the name, address, and telephone number of the school. Each week, the Docent Coordinator prepares a list of all tours scheduled for that week and distributes the list throughout the Museum for the information of security personnel, curators, and other staff members.

Museum on Wheels visits are scheduled by the Oakland School District Office.

Facilities

Middle and upper-level entrance halls combine to form a "Great Hall," which accommodates large special exhibitions, performances, and receptions.

A classroom holds up to forty people for classes, meetings, or small training sessions.

A Docent Room serves as meeting, study, and training area for docents and as the office of the Docent Coordinator.

Publications

Docent News -- a newsletter published ten times a year by the Docent Council. Each issue features a calendar of events as well as information about scheduled events in the Council's three divisions.

Special Exhibit Catalogs -- catalogs published by the Museum for sale both to school libraries for use as supplements to social studies texts, and to Museum visitors. The catalogs contain background information about the culture represented in addition to descriptions of exhibit materials.

In the last series of the Evacuation pictures executed in gouache, Miné moves onto a more communicative plane. Having painfully expressed the anguish and despair, she is now more concerned in communicating with a limited public — that of other Evacuees in the Camp to show them that people can get out of their shocked state of impotence — that they can lift themselves out of stagnation and unite to work together in order to save themselves. Unless she can interest her own people through her art, to do something about their plight and raise their consciousness she is nowhere.

We see how Miné's attitude changes and progresses in the Camp by comparing two pictures of the same theme and composition, **Moving In.** In both pictures, three adults and a child are moving their belongings into the barracks. Dominating the center of the picture is the bent figure of a man with his back to us, his face hidden and his shoulders weighed down by a heavy burden. This is the faceless *nisei* (American-born, second generation Japanese-American) Evacuee, his individuality and spirit crushed by the weight of oppression on his back. Just behind him is the mother, her head covered by a scarf, and her arm wrapped protectively around the boy. In the background stands the barren barracks and mountains of Utah. The positions of the figures are twisted and contorted, like dying branches of an old gnarled tree.

A page from the catalog to the exhibit, "Miné Okubo "

ANALYSIS

Exhibits

Teaching Exhibit Rooms

At a number of the museums visited, well-designed teaching exhibit rooms provide comfortble, quiet places for docents and staff members to work with children away from the main galleries. The areas contain exhibits, seating arrangements, and, in some cases, audiovisual equipment.

An unusual example of such a room is a reconstruction of a Northwest Coast Indian house that opened in 1971 at the Pacific Science Center in Seattle, Washington. (The Science Center was visited briefly in connection with a study of the programs of the Thomas Burke Memorial Washington State Museum, also in Seattle.) Behind a spectacular red, green, and black facade, the room is dimly lit by a central "fire." Pairs of brightly-painted house posts stand at the sides of the structure; and built into the walls are fifteen exhibits portraying aspects of traditional Northwest Coast Indian life. One of the displays is a diorama of a Puget Sound house. Additional cases contain examples of basketry, wood carvings, and other craft items as well as artifacts used in catching and preparing the salmon that was a staple in the diet of the Northwest Coast peoples.

The room is the result of a three-year project undertaken jointly by the Science Center and the Thomas Burke Museum, and the exhibits were designed and built by the Burke Museum's Director of Education. Docents give forty-five-minute slide and artifact programs to schoolchildren in the house on weekdays. While viewing the slides, which are shown with portable equipment, students sit on a platform surrounding the fire.

Another example of a teaching exhibit room is to be found at the Museum of the City of New York. Known as "The Please Touch Room," the area is used by docents during a twenty-minute presentation that is part of a general museum

Entrance to Northwest Coast Indian House, the Pacific Science Center

"Please Touch Room," the Museum of the City of New York

tour covering the history of New York City. Behind a large screen painted with a street scene of New Amsterdam, the room contains an arrangement of seventeenth-century period furnishings representing the house of an imaginary Dutch family. Following a ten-minute introductory talk by a docent, students enter the house in groups of ten or so and take turns working a butter churn, trying on ice skates, and handling other artifacts.

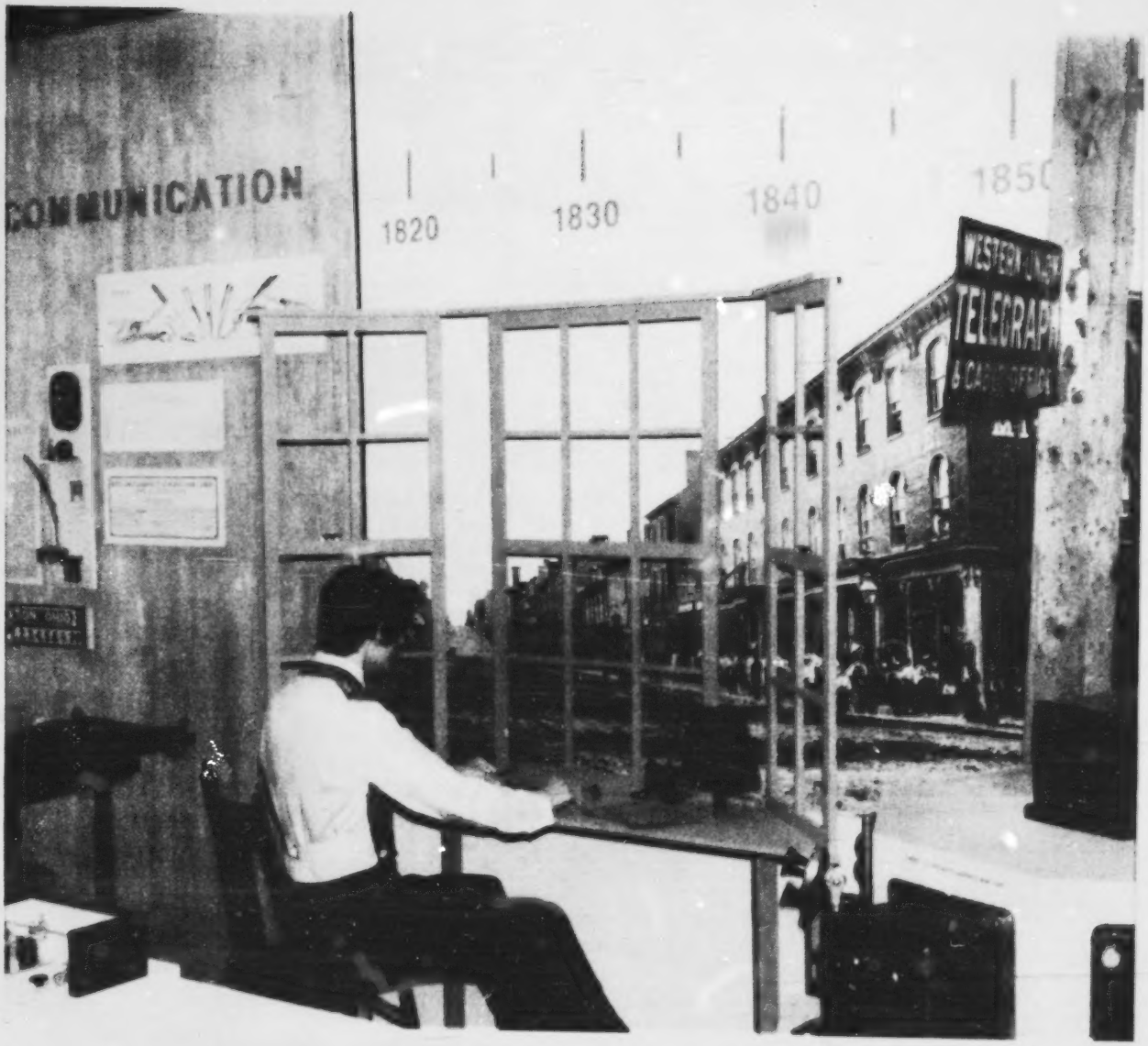
Museums with Teaching Exhibit Rooms

The Arizona State Museum
The Colorado State Museum
The Fort Worth Museum of Science & History
The Milwaukee Public Museum
The Minnesota Historical Society
The Museum of African Art
The Museum of the City of New York
The Museum of New Mexico
The Thomas Burke Memorial Washington State Museum in Cooperation with the Pacific Science Center.
The Valentine Museum

Exhibits Planned by Education Staff

Except in children's museums, education staff members do not commonly play a significant role in the planning of exhibits in main exhibit areas. At the Minnesota Historical Society and the Ohio Historical Center, however, directors of education have been in charge of planning exhibits for the general public.

The Historical Center occupies a new building composed of four exhibit sections or "malls" -- "Archeology," "Natural History," "History," and a "Hall of Fame." The last two of these were planned by the Center's Director of Education, a history scholar and former social studies teacher. The History Mall, part of which is shown here, is divided into seven subject areas. Each develops its theme chronologically, reflecting the way history is taught in most Ohio public



History of communication exhibit, the Ohio Historical Center

schools. The Hall of Fame, which features panel exhibits containing easy-to-read biographical sketches of well-known Ohioans, frequently is used as a "holding area" for tour groups.

Participatory Exhibits

At the Exploratorium in San Francisco, the Children's Museum, and MUSE, many exhibits are participatory, inviting the visitor to manipulate and experiment with them in order to learn from them. At a number of other museums, plans are underway for the installation of participatory exhibits to augment more conventional displays.

The Exploratorium. The Exploratorium, a science and technology museum based on the theme of human perception, contains in a vast shell of a building some 200 exhibits illustrating sensory phenomena. Included are a harp that sings in the light, demonstrating a process of photo-feedback; a "checkerboard" that you light square by square with two light guns in order to learn about polarization; and a rotating turntable that teaches those who climb aboard about the conservation of angular momentum. Most of the exhibits are made by the museum staff in the Museum's shop, which is open to view and an exhibit in itself; some are contributed by industries, federal agencies, and individuals.

Because the theme of human perception relates to many disciplines, the Exploratorium is visited by school groups of all ages in connection with classwork in the arts and the humanities as well as in the sciences. An exhibit popular with teachers and students of everything from English literature to physiology is a dome-shaped tactile gallery designed to heighten your awareness of the values and information that can be gathered through your sense of touch. You enter the dome by way of a twilight vestibule and pass through a "light lock" into a world of total darkness, where you encounter a maze of passageways and chambers

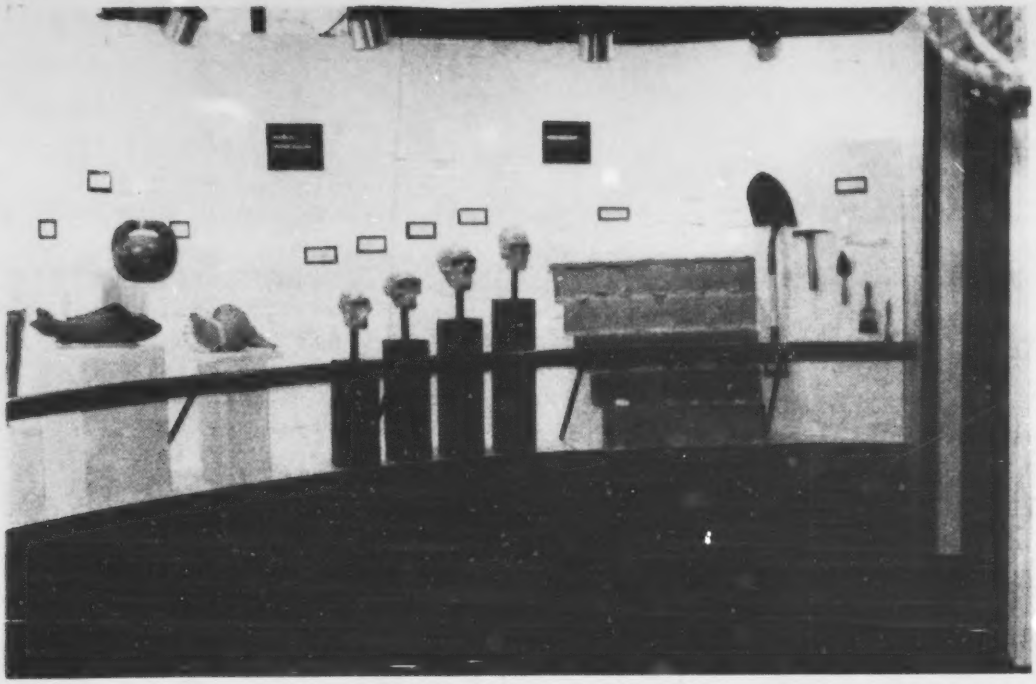
that offer a contrasting variety of impressions -- hard and soft, smooth and rough, cold and warm, yielding and unyielding. By encouraging a little-used means of exploration, the Gallery provides new insights into the processes of discovery.

The University Museum. Another kind of tactile gallery -- and one containing participatory exhibits -- is the new Nevil Gallery for the blind and sighted at the University Museum, the anthropology museum of the University of Pennsylvania in Philadelphia. The Gallery's main exhibit is composed of sculpture from around the world, selected to give the visitor a "tactile-visual" experience. Such diverse pieces as a gilt bronze head of Buddha from Thailand; a wooden dance mask from West Africa; and a wood and fur ceremonial mask from Bali are arranged in a small, circular room around a large textured globe. Other exhibits feature tools used by archeologists; musical instruments that the visitor may play; and casts of the skulls of Australopithicene, Homo erectus, and modern men placed in stair-step order to illustrate man's evolutionary development. The exhibits are augmented by simple labels written in Braille and arranged so that a blind person can explore the Gallery unaided. During the school day, specially-trained docents are on duty in the Gallery, answering questions and talking informally with scheduled groups of children from area schools for the blind.

Programs Given in the Museum

Programs for Young Children

The majority of children visiting the museums (other than children's museums) during the school day are fourth, fifth, and sixth graders. Students at these levels are considered by both the museums and the schools to be at a "good age" for museum exposure -- old enough to grasp abstract concepts and not to tire easily, and young enough to take part in group discussion and activity without the self-consciousness frequently demonstrated



A section of the Nevil Gallery for the Blind and Sighted, the University Museum

Visitors to the Exploratorium study one of the Museum's many participatory exhibits, a machine that demonstrates the similar motions of light waves, sound waves, and waves in the water.

by older students. Some of the museums feel that visits for second-graders and below should be led by the classroom teacher, who, it is reasoned, is better able than a museum docent or instructor to present the material on an appropriate level. Other museums, such as the Valentine Museum and the Museum of the City of New York, have been pleased with the success of programs developed especially for young children.

The Valentine Museum. The program at the Valentine Museum -- a historical museum in Richmond, Virginia -- is a "highlight tour" given during the school year to primary classes. The experience lasts an hour and provides an introduction to exhibits for youngsters who will be returning in later years for more specialized programs. Participants visit a gallery devoted to Virginia Indians; a textile gallery, where they see spinning and weaving demonstrated; two period kitchens, where they use and handle a variety of utensils; and a nineteenth-century schoolroom, as they compare the ways of life of the Virginia Indian prior to Western contact, colonial man, and modern man. At the end of the hour, in a museum classroom, the docent reinforces the theme with a game played with cards symbolizing food, clothing, shelter, and transportation characteristic of the three epochs.

The Museum of the City of New York. The program at the Museum of the City of New York takes place in a Fire Gallery containing engines and other firefighting equipment dating from the late 1800's. The activity is given in the summer to groups of Head Start children and in the winter to both Head Start and primary school classes. Usually it is led by one of the Museum's Urban Youth Corps workers, who wears a fire hat for the occasion and carries a fire horn. Following a short slide presentation that tells the story of how an old fire engine came to be in a museum, the children form a bucket brigade by lining up on either side of an 1812 pumper. Facing a print of a burning building, they pass buckets down the line and pretend to extinguish the flames.

Then they discuss briefly firefighting methods. The purpose of the exercise is to give youngsters a pleasant introduction to the museum and to present the subject of fire in a way that is not frightening.

Museums with Formal Programs Especially for Young Children.

The Fort Worth Museum of Science and History
The Milwaukee Public Museum
The Museum of the City of New York
The Valentine Museum

Programs for High School Students

High school students make infrequent use of museums during the school day for two primary reasons: teachers find it difficult to work field trips into a rigid schedule, and few teenagers enjoy the usual kind of guided tour. Unless a museum offers a program suited specifically to the high school level, the students are apt to be unenthusiastic. All of the museums visited welcome teenagers to take part in regular formal programs, but only a few go beyond that. Outstanding among the few is the University Museum, which offers to junior and senior high school students from the Philadelphia area, free technology workshops taught by craftsmen and other specialists from around the world.

Funded by a matching grant from the National Endowment for the Humanities, the programs are offered in two-hour sessions, Tuesday through Friday afternoons, with four classes of between twelve and twenty-five students from urban and suburban schools each attending a session a week for six weeks. So far, there have been three workshop semesters. The first was taught by an Eskimo family from Alaska; the second, by a Buddhist monk, a dancing teacher, and an architect from Thailand; and the third, by three Kwakiutl Indians from British Columbia -- expert carvers who taught students how to carve and

paint traditional masks and plaques and worked during non-workshop hours in the lobby of the Museum's Education Section, carving and painting a totem pole. Soon there will be a semester on oriental rug making from spinning and dying the wool to weaving, to be taught by an Afghani couple.

The purpose of the workshops is to use technology as a vehicle for teaching about a culture and a people. How this is accomplished, without a trace of conscious pedagogy, is illustrated by an incident observed during the Kwakiutl series. One of the craftsmen was finishing the tedious process of binding the blade to the handle of a knife he was making. In cutting the loose ends of the binding cord, he slipped and nicked the binding. He examined the results of his error; decided that serious damage had been done; and quietly, without the least sign of exasperation, unwound the cord and began again. Students working with him learned from the incident something not only of the patience of the Kwakiutl people but also of the universal attitude of the craftsman to his work.

In all of the workshops, a quiet rapport develops between students and teachers. Because the emphasis is on nonverbal skills, youths of diverse backgrounds and scholastic aptitudes can benefit from the experience.

The cost of the program to the Museum is lower than might be expected -- about $37,500 for two years. Workshop teachers, who are recruited through the Museum's built-in scouting system of archeologists working in the field, are paid salaries equivalent to amounts paid Philadelphia public school teachers. Finding supplies is sometimes a problem. For the Kwakiutl workshop, special paint and brushes were ordered from a factory in the state of Washington; and as part of their learning experience, students were making their own tools, including adzes from maple branches they had cut themselves.

Technology workshop for high school students, the University Museum

Museums with Special Formal Programs for High School Students

The Afro American Cultural Development Center
The Colorado State Museum
The Exploratorium
The Fort Worth Museum of Science and History
The Hagley Museum
The Minnesota Historical Society
The Museum of Cultural History
The New York State Historical Association
The University Museum, University of Pennsylvania

Repeat Visit Programs

Several of the museums are beginning to offer "repeat visit programs" that provide cumulative experiences for school groups wanting to do deeper, more extended work. The University Museum program for high school students is of such a nature. Another example is a course of ten experimental classes given in the spring of 1972 by the Exploratorium.

The course attracted a group of exceptionally bright third, fourth, and fifth graders from a public school in the San Francisco suburb of Mill Valley. Classes were conducted one morning a week, alternately at the Museum and at the school. The topic of the program was "the senses" with particular stress on the sense of sight. The emphasis was on group participation.

The first session, held at the Museum, involved group discussion and repeated trips through the Tactile Gallery -- activities aimed at making the child more aware of his senses and of their importance to him. Subsequent sessions dealt with "image formation," "eye structure," "depth perception," and a number of other topics. For the last two meetings, the children followed written "recipes" to build exhibits modeled after those at the Museum.

Two, sometimes three, Exploratorium staff members taught the course with the help of a teacher from the school. Sometimes the lessons were quite structured; on other occasions, students were given a choice of activities. Both approaches worked in some instances and not in others. A particularly successful session at the school offered experiments and games dealing with stereovision, color vision, and the differences between human eyes and those of animals. The children worked independently, moving from one activity to the next according to their individual interests. The more successful lessons at the Exploratorium were fairly structured, with the children proceeding as a group from exhibit to exhibit in a fixed pattern. (During freer sessions at the Museum, some of the children had trouble concentrating.)

The program was enthusiastically received by students and teachers, and during the school year of 1972-73, courses of this kind are being given again for the Old Mill School and for another suburban school. In addition, four successive courses, each consisting of five, day-long classes held once a week for five weeks, are being taught entirely at the Exploratorium to classes of twenty-five fourth, fifth, and sixth graders from a public school in the City. The classes are held on Mondays and Tuesdays, when the Museum is closed to the general public, and supply the children's regular science curriculum.

Museums Offering Repeat Visit Programs

The Colorado State Museum*
The Exploratorium
The Minnesota Historical Society*
The Oakland Museum
The University Museum, University of Pennsylvania

* Both the Minnesota Historical Society and the Colorado State Museum offer series of lessons in State history. Teachers may bring their classes for just one of the lessons or for as many as six in succession (an entire series).

Informal Programs

Informal programs, offered when school is not in session, include a variety of clubs, classes, workshops, junior curatorial programs, junior membership programs, and field trips. At a few museums visited, the programs are free; there is usually a modest charge, with "scholarships" available for those who cannot afford to pay. Except at museums situated in low-income neighborhoods, the programs are attended mostly by middle-class youngsters who either live near the museum or whose parents provide transportation. An exception is a summer program for disadvantaged children offered by the Children's Museum.

At some of the museums, all informal activities are led by the regular staff; at a few, classes and workshops are taught by outside specialists. Described below are informal programs of the Stovall Museum of Science and History and the University Museum.

The Stovall Museum. On a small budget and with limited facilities, the Stovall Museum of the University of Oklahoma in Norman, gives imaginative workshops throughout the year. The sessions are taught by paid and volunteer college students and held wherever there happens to be space -- in borrowed storage areas or meeting rooms, and sometimes out-of-doors. In the summer of 1972, four workshops were offered at a charge of $5.00 each.

One of the programs, "When Home Was a Log Cabin," involved fifteen ten-to-fourteen-year-old girls in an experiment in frontier living that entailed twelve sessions held over a four-week period. By participating in activities that were part of the everyday pioneer experience, the children gained a realistic understanding of life in frontier America. The youngsters made sunbonnets, spun wool on a hand spindle and with a wheel, dyed the wool with natural dyes, wove grass mats on a simple loom, and braided rag rugs. In so doing, they gradually

came to appreciate the amount of time, skill, and work involved in pioneer crafts and technologies. The activities were augmented with the showing of two films and with chapters read aloud from the Laura Ingalls Wilder classic, Little House on the Prairie. For the last session, the girls gave a party for four blind children enrolled in another Museum workshop.

The party was planned to give the two groups of youngsters a chance to become acquainted. Often blind children have little opportunity to meet other children socially. The young hostesses introduced their guests to craft materials and processes and served refreshments of hoe cakes and buttermilk made earlier in the day. The atmosphere was relaxed and merry, with everyone agreeing that the pioneers must have been extremely hungry to relish such fare. Towards the end of the afternoon, while the hostesses did the dishes, one of the workshop instructors brought out a box of pioneer artifacts for the blind youngsters to discuss and handle.

The Museum's special workshop for blind children, "Anatomy of a Museum," was given for the first time in 1972. Through eight, ninety-minute sessions, the program offered a sampling of the Museum's collections. One of the sessions, on Oklahoma Indians, was held out-of-doors in a paper tepee carpeted by a buffalo skin rug. Dressed in moccasins and feather headdresses, the children danced and drummed along to recordings of Indian music; ate fried bread cooked over a campfire; played with a buckskin doll; and shot at a make-believe buffalo with a bow and arrow as they imagined life on the plains many years ago.

In organizing "Anatomy of a Museum," the Museum had difficulty finding parents who were willing to let their children take part. Although more than twenty parents were reached by letter and telephone (names were obtained from a classroom teacher and from a librarian

Stovall Museum Workshops. Top: pioneer party. Bottom: program on Oklahoma Indians for blind children.

at the State library for the blind) and a meeting was held for interested parents, in the end, only six children were enrolled and four attended regularly. The Museum feels that the low attendance was due in part to the twenty-five-mile distance between the Museum and the metropolitan area where most of the youngsters lived, and in part, to the attitude of the parents, most of whom were unfamiliar with the Museum and seemed to be skeptical that an institution would spontaneously offer a program for their children.

The University Museum. The University Museum offers a variety of informal programs, including the following three.

Music and Dance Workshops, based on the Museum's Frishmuth Collection of musical instruments from Asia, Africa, and the Pacific, were begun in 1972. Recently, a six-session workshop called "The Magic of Africa" was taught by a troupe of African dancers to a class of twelve ten-year-olds in the Museum's African Gallery. During the two-hour sessions, held Saturday mornings, the Museum resounded with clapping and singing and the thumping of African drums. Besides learning dance steps and the playing of musical instruments, the youngsters became acquainted with the food, customs, clothing, and folk lore of the continent as they sang songs, played games, listened to stories, and even cooked and ate in the gallery with artifacts from the Museum's collections. The series culminated in a concert for parents and friends, for which the children dressed in costumes they had made themselves from traditional materials. Additional workshop series on the music of India, China, and Japan are planned for the future.

An activity closely related to the Music and Dance Workshops is an Apprentice Program. Instruments in the Frishmuth Collection are restored to playable condition for use in the workshops and in other activities. There is an apprentice class for graduate students and one for undergraduate and high school students.

The latter class has about five students enrolled and meets once a week, with participants giving additional weekly time to restoration projects as their schedules allow. The workshop was begun in 1972 with the help of a $5,000 grant from the Presser Foundation.

An archeological dig -- a continuing, free, Saturday morning program for teenagers, taught by the Museum's Director of Education -- is introducing fifteen students to the purposes and methods of archeology. Through actual participation, the youngsters are learning that there is more to archeology than "digging" -- that careful preparatory research and extensive follow-up analysis are also important. In addition they are becoming aware of the complexities of human society -- an awareness which the Museum hopes will lead to an increased appreciation for other cultures.

In the spring of 1972, the students took part in an excavation at Valley Forge Park, where previous work by a team of archeologists from the William Penn Memorial Museum had uncovered the remains of four huts occupied during the Revolutionary War by George Washington's officers. The students' work on site was prefaced by two Museum sessions, during which the youngsters were introduced to surveying and to methods of photographing and excavating a site. In the course of their subsequent field work, they helped the William Penn team to uncover a trash pit and the hearth of a hut and to map the site of a headquarters. For a final session, they visited a National Park Service Laboratory to observe artifacts being washed and analyzed.

Museums Offering Informal Programs

The Afro-American Cultural Development Center
The Children's Museum
The Colorado State Museum
The Exploratorium
The Fort Worth Museum of Science & Industry

The Hagley Museum
The Historical Society of Delaware
The Milwaukee Public Museum
MUSE
The Museum of African Art
The Museum of the City of New York
The Oakland Museum
The Stovall Museum of Science & History
The University Museum
The Valentine Museum

Extension Services

Loan Materials

At museums everywhere, loan materials are in great demand. There are waiting lists for even the most shopworn artifact kits and the most ragged sets of photographs "suitable for bulletin board display." Of the eighteen museums who loan audiovisual materials to schools, eleven have developed pre-packaged exhibit loan kits ranging in complexity from simple collections of objects accompanied by inventory sheets to multi-media packages complete with teacher's guides, films, filmstrips, materials for craft projects, and audiovisual equipment. In all but one instance (The Children's Museum), the kits are loaned free. The schools in some instances pay postage one way for kits that are shipped or mailed. Most state museums and state historical societies distribute their kits statewide.

The Historical Society of Delaware. One statewide program, the Artifact Loan Program of the Historical Society of Delaware in Wilmington, reaches county and city parks; every public, private, and parochial school in the State of Delaware; and a number of institutions for handicapped children. The Society has also a less extensive Manuscript Loan Program for high school students.

The Artifact Loan Program has two versions --

a "regular" version which sends artifact collections to Delaware classrooms for teachers to use with American History and Delaware history lessons and a "special" version that presents materials in situations that are in some way different from the conventional classroom one.

The regular version offers fourteen collections containing about eleven artifacts apiece. Each collection is built around a specific chapter from the American History textbook used in Delaware's public school eighth-grade classrooms and is named for the chapter to which it pertains. Accompanying each kit is a teacher's guide containing general and specific information about the artifacts and a brief explanation of how the items reflect the ideas and events of their time. The units represent the period of history beginning with the arrival of Delaware's first white settlers and ending with the Civil War -- the period usually studied in the classroom. The most popular collection, "The Framing of the Constitution," includes artifacts ranging from a pepper pot, to a snuff box, to a pair of duelling pistols, to pictures of George Reed and Gunning Bedford, Delaware's representatives to the Constitutional Convention. The presentation of a regular artifact collection takes an hour, or classroom period. The classroom teacher, who usually has been trained by the society to use the materials, delivers a brief lecture based on the teacher's guide and then passes each artifact around the class for students to handle and examine. As she does so, she explains how the item was used, of what it was made, and what it reveals about the period of history it represents. Although the program was developed for eighth-graders, it is used by fourth, fifth, and eleventh-grade social studies classes as well.

An example of a "special" artifact program is a regularly-scheduled lesson given to handicapped children at Wilmington's Alfred I. Dupont Institute. Once a week, staff members from the Society take a collection of twenty or so artifacts to the Institute and spend a morning working in

a hospital classroom with a group of about fifteen children, most of whom are confined to beds or wheelchairs.

A recent program given at the Institute on the "Framing of the Constitution" began with an informal talk by the Director of the Society describing the circumstances surrounding the convention, the importance of the Virginia delegation, the role of Madison as father of the Constitution, and the controversy regarding the adoption of the Bill of Rights. Following this introduction, the Director and two of his staff each presented a third of the artifacts to a third of the children. As the youngsters handled the items, the staff members answered questions and talked about the issues which the objects represented -- i.e. a pair of eyeglasses of the type worn by Benjamin Franklin initiated a discussion of Franklin's role in the convention, and an inkwell led to a consideration of methods of communication. Although programs given at the Institute deal with specific history topics, they do not pertain directly to a course of study. Their main purpose is to give participants, who generally range in age from ten to thirteen, something to think about and do.

Another "special" program takes artifact collections to nearby parks, where children participating in activities sponsored by county and city departments of recreation can examine and use the items. The collections are built around themes such as "The Whaling Industry," "Eighteenth-Century Craftsmen," and "Tea Drinking in Eighteenth-Century America," which often relate to a craft activity being taught by the Parks and Recreation Department staff. Student employees from the Society (hired for the summer and paid by the Department of Parks and Recreation) are responsible for transporting the artifacts and supervising their use. Each student visits two parks a day and stays at each location for two hours. In 1972, 1,506 children participated in the program.

Museums Having Organized Loan Services*

The Afro-American Cultural Development Center
The Arizona State Museum
The Children's Museum
The Colorado State Museum
The Fort Worth Museum of Science and History
The Hagley Museum
The Historical Society of Delaware
The Milwaukee Public Museum
The Minnesota Historical Society
MUSE
The Museum of African Art
The Museum of Cultural History
The Museum of New Mexico
The Oakland Museum
The Ohio Historical Center
The Thomas Burke Memorial Museum
The University Museum
The Valentine Museum

Programs Given in the Classroom

Few of the museums offer regularly-scheduled programs in the classroom. One exception is the Milwaukee Art Center, which gives more than 250 classroom presentations a year to elementary, intermediate, and high school students in Milwaukee, Wisconsin,urban and suburban schools. One staff member, a Curator of School Programs, is responsible for planning and presenting the lessons, which use slides of paintings, sculpture, and photographs as well as collections of tactile artifacts to augment curriculum areas in the humanities. The programs generally last an hour when given to elementary students and forty-five minutes, or a class period, when given to older youngsters. Sometimes the slide presentations,

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* Materials loaned may include panel exhibits, module exhibits, slide sets, films, collections of objects displayed in cases provided by the borrower, and kits of tactile materials.

which are narrated "live" in an informal question-and-answer style, are accompanied by music on tape. This year fifteen programs, each dealing with a different subject, are offered.

One of these, a lesson entitled "Art and Colonial America: 1600-1800," illustrates with slides of paintings and three-dimensional folk art pieces a discussion of Colonial thinking, values, and social customs. For example, students discuss eating habits while viewing a still life of fruit; leisure time activities while studying a tavern scene; and the state of education while observing a scene of a man reading to another who could not read. Following the slides, the children handle a selection of artifacts that have bearing on the discussion. Presently, the demand for the classroom presentations is far greater than can be met by one person, and the Museum is considering ways to expand the service, possibly by using volunteer docents.

A museum that has been successful in sending docents to the schools is the Museum of Cultural History, the anthroplolgy museum of the University of California at Los Angeles. Through a "Peripatetic Museum Project" docents visit Los Angeles elementary, junior high, and high school classrooms to give artifact programs on the subject of prehistoric man. Currently supported by a $4,000 matching grant from the National Endowment for the Humanities, the project uses selected examples from the Museum's large collection of Old World stone and bone tools dating from lower Paleolithic times to the Bronze Age.

Each of the programs lasts from forty-five minutes to an hour and involves one docent working in the classroom with a class-sized group. The docent brings with her an assortment of about eighty choppers, scrapers, hand-axes, blades, points, awls, and other tools, which she spreads out in chronological order on a table in the front of the room. Using the artifacts, a map, and reproductions of prehistoric art to illustrate what she is saying, she delivers an informal lecture

A patient at the Alfred I. DuPont Institute learns about the framing of the U.S. Constitution during an artifact lesson given at the Institute by the Historical Society of Delaware.

Participants in the Museum of Cultural History's Peripatetic Museum Project examine evidence of man's evolution.

about man's evolution during Pleistocene and Post-Pleistocene times and the interrelationships between tool-making and mental development. Often, at the beginning of the talk, she demonstrates the efficiency of stone tools and the basic techniques of making them by striking off a flake from a nodule of flint and inviting one of the children to cut a piece of paper with the resulting blade. Throughout the lecture, she stresses the special qualities that have distinguished man from other animals since earliest times and passes artifacts around the class for the children to handle.

In 1971-72, the Peripatetic Project reached approximately fifty-eight-hundred students, most of whom were in the upper-elementary and intermediate grades. The value of the program is that it introduces youngsters at an early age to a fundamental subject which most classroom teachers haven't the specialized knowledge to cover adequately. An acquaintance with prehistory can help the child to better understand himself and to grasp the concept of man's common ancestry.

The project is less complicated to run than you might expect. A part-time Museum Technician, who has a degree in anthropology, schedules the programs and trains the docents, who provide their own transportation. The docents help to maintain the collections as part of their continuing training.

Satellite Museum Program

Through a Satellite Museum Program, the Museum of Cultural History loans exhibits of ethnic art materials to community centers and other institutions in neighborhocds inhabited predominately by ethnic minority groups. The exhibits, which are organized around themes such as "Indian Costume of Mexico" and "Music and Ceremony of Central and East Africa," contain between forty-five and one hundred objects augmented by slides and tape recorded music. Loan periods range from one to twelve months.

Teenaged and adult volunteers from the communities help to set up the exhibits and act as docents to visiting groups. Stationed at each exhibit location is a paid or a volunteer "gallery sitter," also from the community, who answers visitors' questions concerning the displays, acts as guard, and operates audiovisual equipment. Presently, there are satellite exhibits at four locations, including a junenile detention hall, where residents are the docents. Since the program began in 1969, it has reached approximately 116,000 visitors, about 70,000 of whom have taken part in guided tours. More than half of the tour participants are students of elementary through high school age.

The tours, which are quite informal, are based on information contained in exhibit catalogs written by the Museum's Curator of New World Collections, who is responsible for planning the exhibits, recruiting and training the docents, and giving occasional slide lectures at exhibit sites.

The purpose of the program is to expand awareness of the ethnic arts. It has succeeded in this and in attracting wide community support largely because it is relaxed and undogmatic and because the Curator in charge is well-acquainted with residents of the communities served. Neither vandalism of exhibits nor shortage of docents has been a problem.

Television

The Fort Worth Museum of Science and History and the Ohio Historical Center make regularly-scheduled appearances on local children's television programs; and several other museums make occasional appearances on children's or adult shows. The Valentine Museum frequently loans collections of tactile artifacts to an educational station. All who have tried the medium are enthusiastic about it, the general opinion being that not only is television an effective means of reaching new audiences, it is also a good way

of attracting museum visitors and of increasing public awareness of the role played by museums in the community. In April 1972, the Ohio Historical Center began to make weekly appearances on "Friendly Junction," a daytime program for preschoolers that reaches an estimated 60,000 families a day. Since then, the museum has become something of a hit with young viewers and their parents coming in to see at first hand, exhibit materials introduced on the show.

Staff

Regular Staff

The majority of the ninety-two staff people interviewed hold undergraduate degrees, most frequently in liberal arts. Many have taken graduate work, usually in education. About one-third are former classroom teachers; one-sixth have come to their jobs directly from college; and several are former housewives with grown families and experience in volunteer community work. There is one lawyer and one professional artist. Of those in charge of education programs, half are women and half are men.

Part-Time Staff

Volunteer Docents. Opinions differ quite radically regarding the value of volunteer docent programs. At a number of the museums, volunteers have been banished from the scene and part-time individuals hired in their place; at several other of the museums the thought of using docents has never been entertained. In both cases, the volunteers are considered to be generally unreliable, difficult to train and manage, and unable to relate well to children of ethnic and income backgrounds different from their own. A few of these same museums see the danger of docent organizations becoming social clubs and growing out of hand. (In cases where this is known to have happened, the result has been that the education programs have come to exist more for the docents than for

the children they were originally intended to serve.) Other museums, on the other hand, are well pleased with their docents, praising the fresh enthusiasm of the volunteers and viewing docent programs as effective means of increasing community awareness of museums. Most of the docents are college-educated women in their late thirties or older.

Few of the museums have organized methods of recruiting docents. A number have found that although advertising through mass media may bring in large numbers initially, people thus attracted often come on impulse and fail to stay. The consensus seems to be that the best new docents are brought in by friends who are already docents. The University Museum has been successful with a letter sent to members of area college alumnae chapters.

As a rule, the docents are trained through an initial series of fall meetings spread over a period of two or three weeks followed by periodic brush-up sessions from time to time. In addition to regular training, docents at the University Museum and the Museum of Cultural History may audit undergraduate courses. Most museums provide as much training as feasible although a few are hesitant to make the sessions too demanding for fear of frightening new docents away. A number of museums with attractive training programs complain that a few of their docents take part in training each year and then decline to give tours. This does not happen where docents are required to give a specified number of hours each month in order to remain in the program.

In most instances, initial training entails an orientation lasting most of a day (and involving a highlight tour or tours and a talk about purposes and goals); a series of lectures by the curatorial staff; independent reading; and the observation of tours by experienced docents. Sometimes there are talks by outside speakers. Periodic training varies in frequency from once a week to several times a year and might involve a field trip, a

talk by a docent who has done special research, or a lecture by a curator or an outside speaker.

The relative importance of docent programs varies widely. Some education programs would collapse without their volunteers; others would continue to operate on a reduced scale. At the Oakland Museum and the Braintree Historical Society, entire programs are run by volunteers; while at the Colorado State Museum, docents give only about 20 percent of tours and lessons, and at the Exploratorium, they are scheduled to work only on Wednesday evenings -- the Museum's least busy time.

Museums Having Docent Programs

The Braintree Historical Society
The Colorado State Museum
The Exploratorium
The Fort Worth Museum of Science and History
The Milwaukee Public Museum
The Museum of the City of New York
The Museum of Cultural History
The Museum of New Mexico
The Oakland Museum
The Ohio Historical Center
The Thomas Burke Memorial Museum
The University Museum
The Valentine Museum

Paid Guides. The Hagley Museum, the New York State Historical Association, and the Historical Society of Delaware employ women from the community to work part-time as tour and workshop guides. Similar in background and education to volunteer docents, the women are hired selectively and expected to undergo extensive training.

Paid High School Students. The Exploratorium employs sixteen or seventeen San Francisco public high school students each semester to work in the museum afternoons, interpreting exhibits and the phenomena they illustrate. Called "Explainers," the students are paid two dollars an hour for

working either ten or twenty hours a week. Explainers working twenty hours receive classroom credit.

The students are hired at the beginning of the summer and at the start of each school semester by a museum staff member responsible for their selection and training. The Museum tries to obtain a fairly even racial mix and an equal number of boys and girls. Beyond these considerations, the chief criterion is that applicants demonstrate an enthusiasm for the Museum.

Explainers are trained initially in four two-hour sessions on two successive weekends during hours when the Museum is closed to the public. Before being put to work, they are taught how to operate the exhibits and as much as possible about the principles the exhibits illustrate. During the first three weeks of their employment, each student is assigned to one exhibit section where he learns exhibits thoroughly by explaining them to visitors. At the end of three weeks, he moves to another section and three weeks later to another. By the end of the semester, most Explainers have become familiar with every exhibit in the Museum. The training has been continuous, with the staff person assigned to the students following them about, listening to their explanations, answering their questions, and making suggestions. Every Saturday and Sunday, hour-long brush-up sessions are held. The Explainer program benefits both museum visitors and Explainers by providing for the visitors a reliable source of information and for the Explainers, a concentrated learning-through-teaching experience impossible to duplicate in the classroom.

Paid College Students. A number of the museums employ graduate and undergraduate college students to work either full-time or part-time, giving tours and lessons, developing materials and programs, and doing odd jobs. As a rule, both the students and the museums are enthusiastic about these arrangements. The students are praised for being flexible, imaginative, and able to

relate well to children; the museums, for being stimulating places to work. Students seem to be happiest and most productive in small museums, where they are given a great deal of latitude and responsibility.

Student salaries come from the following sources: from the museums entirely; partly from the museums and partly from the colleges, with the college-paid portions contributed by the U.S. Department of Housing and Urban Development; from the cities in which the museums are located with funds provided by the U.S. Department of Labor; and from city and country departments of parks and recreation.

Museums Employing College Students to Work in Education Departments

The Exploratorium
The Historical Society of Delaware
The Minnesota Historical Society
MUSE
The Museum of the City of New York
The Stovall Museum of Science and History

Unpaid College Students. Unpaid college students also are found to be valuable resources. In most instances, the students receive laboratory, independent study, or student teaching credits for working at the museums several hours a week for a semester or a quarter. The following museums have such arrangements:

The Arizona State Museum
The Colorado State Museum
The Milwaukee Art Center
MUSE
The Oakland Museum
The Ohio Historical Center
The Thomas Burke Memorial Washington State Museum
The University Museum
The Valentine Museum

Funding

The museums' annual operating budgets range from $1,600 to over $3,000,000, and amounts spent on education programs also cover a wide range. Special grants support education programs at twelve of the museums. Sources of grant support include:

The National Endowment for the Arts (Wider Availability of Museums Program)
The National Endowment for the Humanities
The National Science Foundation
The U.S. Office of Education (funds made available through schools by Titles I and III of the Elementary and Secondary Education Act of 1965 and directly to museums by Title IV of the same act, by the Emergency School Assistance Fund, by Title VII of the National Defense Education Act, and by the Environmental Education Program.)
The New York State Council on the Arts
The Weatherhead Foundation
The Fels Foundation
The Merrill Trust Fund
The Presser Foundation
The Haas Community Fund
The Carnegie Corporation
The Rockefeller Family Fund

Other sources of support for education programs include gifts from community service organizations, fees charged for services, a revolving fund for the development of educational materials, proceeds from special fund-raising events, and rental fees charged to organizations for the use of museum facilities. The Museum of the City of New York helps to fund special programs for disadvantaged children with proceeds from birthday parties for other children. The parties are held in the museum's teaching exhibit room for a fee of $7.50 per child.

Coordination with Schools

Museum Programs and the School Curriculum

At all of the museums, formal programs are planned and taught with the school curriculum in mind. At the following museums, formal programs have been designed to relate directly to specific classroom units or textbook chapters, and this has required close cooperation with the schools.

The Fort Worth Museum of Science and History
The Hagley Museum
The Historical Society of Delaware
The Milwaukee Public Museum
The New York State Historical Association
The Oakland Museum

With the exception of the Historical Society of Delaware, the various approaches taken were discussed previously. They involve consultation with principals, individual teachers, and curriculum planners; the study of curriculum outlines; and special training for teachers. At the Historical Society, two extension services -- the Artifact Program, described previously, and a Manuscript Program -- were begun in response to requests from teachers. Both are based on standard history textbooks used in Delaware public school classrooms. The Manuscript Program, which loans packets of facsimiled source materials to high school classrooms to augment the study of two units -- "The Causes of the War of 1812" and "The Adams-Jackson Presidential Campaign of 1828" -- was planned with the help of a committee of teachers, who wrote the teacher's guides that accompany the materials. The training of teachers in the use of the artifacts and the manuscripts is accomplished primarily in the classroom, through demonstration lessons. Sample lessons, conducted by an experienced teacher and televised by an educational station, also have been used for training.

Communication with Teachers

If teachers are to make effective use of museums, they must have a clear idea of what museum

education is all about. Many teachers are poorly informed in this respect. As Richard Grove points out in Museums and Education, "Indeed many educators pay strange tribute to the museum mystique. They think it beneficial to children to simply march them through a museum at top speed and in as straight a line as possible, considering that those exhibits keep blocking the way."

How, then, to reach the teacher? At the museums visited, basically two methods -- publications and workshops -- are used.

Publications. Most of the museums send out brochures or letters at the beginning of the school year, describing program content and rationale. The publications have drawbacks in that they are time-consuming and expensive to produce and mail and frequently fail to reach their audience. Those that seem the most successful are visually striking, standing out from the flow of mimeographed notices that teachers receive in their mailboxes daily. A number of the museums have arrangements whereby the publications are distributed free by the school systems.

Workshops. The museums listed below hold workshops for teachers and for student teachers. The programs are of two types: those designed to familiarize participants with the services of a particular museum and those designed to train participants in the use of museums and other community resources. The former kind, which are given free of charge, are held sometimes in the museums and sometimes in the schools. Usually each program entails a single session consisting of a demonstration program followed by a group discussion. Poor attendance often is a problem. The latter kind, for which there is frequently a charge, range from the single-session "Teacher Institutes" of the Minnesota Historical Society to the month-long summer social studies workshops of the New York State Historical Association, both of which were described earlier.

The Arizona State Museum
The Braintree Historical Society
The Children's Museum
The Colorado State Museum
The Exploratorium
The Hagley Museum
The Historical Society of Delaware
The Milwaukee Art Center
The Milwaukee Public Museum
The Minnesota Historical Society
The Museum of African Art
The Museum of New Mexico
The New York State Historical Association
The Ohio Historical Center
The Stovall Museum of Science and History

Evaluation of Programs and Materials

Most of the museums try to measure the effectiveness of their programs from time to time through questionnaires circulated among teachers and through other informal means. A few have tried to formally evaluate programs and materials with the aid of outside observers and/or professionally-designed procedures. In some cases, testing has been done after the product was completed and placed in general use; in other cases, when the product was in nearly-finished rough form; and in one case -- that of the Children's Museum -- while the unit was under development and then again when it was nearly finished. The third method seems to be the most useful because it reduces chances for making expensive mistakes and practically guarantees that the unit will suit the level and interests of its intended audience.

Museums where Programs have been Formally Evaluated

The Children's Museum
The Colorado State Museum
The Museum of African Art
The Museum of New Mexico

Distribution of Extension Materials

Generally, the distribution of compact materials, such as films and filmstrips, presents few difficulties; however, that of loan kits and traveling exhibitions is another matter, particularly if statewide. Shipping and mailing costs are high and damage and loss are problems. Both the Colorado State Museum and the Historical Society of Delaware have worked out satisfactory methods for statewide distribution. The system used at Colorado was described previously.

The Historical Society contracts with the local franchise of a moving and storage company to distribute regularly-scheduled artifact kits to the schools. The moving company stores the kits in a section of its warehouse and distributes them according to a schedule provided by the Society. On the day indicated on the schedule, the company delivers a kit requested by a particular school to the school's office and picks up the kit used by the school the previous week, checking the contents of the unit to be picked up against an inventory sheet. If the delivery man finds that an artifact in the kit to be picked up has been damaged or lost, he leaves the unit at the school until the object is found or replaced. Thus, the kits are distributed from school to school on a rotating basis, and each school is held responsible for the artifacts in its possession.

Facilities

A few of the museums have entire areas designed and set aside for educational activities; some have one or two special rooms; and some make do with very limited spaces and equipment. One museum with particularly well-planned facilities is the University Museum, where a new Educational Section reached by a special entrance opening onto a parking area for school busses includes a spacious lobby, a cloakroom, an automated cafeteria, restrooms, a children's museum shop, and two classrooms as well as the offices of the Museum's Education Division.

Museums With Well-Planned Facilities

The Fort Worth Museum of Science and History
The Milwaukee Art Center
The Milwaukee Public Museum
MUSE
The Museum of African Art
The University Museum

Publications

Brochures. As indicated previously, most of the museums send out letters, brochures, or other printed material at the beginning of the school year to advertise their programs. The publications usually contain brief outlines of program content and instructions for making program reservations. Several are intended for bulletin board display and a few contain posters for the same purpose. A brochure used by the Milwaukee Art Center is made up of four self-contained sections. each of which describes one aspect of the Center's activities. The sections are mailed individually to teachers requesting information about specific program areas or, as a package, to teachers wanting to know about Center activities as a whole.

Periodicals. Periodicals include newsletters for docents, teachers, or junior members and magazines for students. The four-page newsletter shown here is published ten times a year by the education staff of the Valentine Museum for members of the Museum's Junior Center and contains games, puzzles, information about upcoming events at the Center and a schedule of community activities of interest to young people.

Exhibition Catalogs. The Museum of African Art, the Museum of Cultural History, and the Oakland Museum have developed exhibit catalogues which are used both as guides to exhibits and as classroom supplements to social studies texts. All of these catalogs contain background information as well as descriptions of exhibit materials.

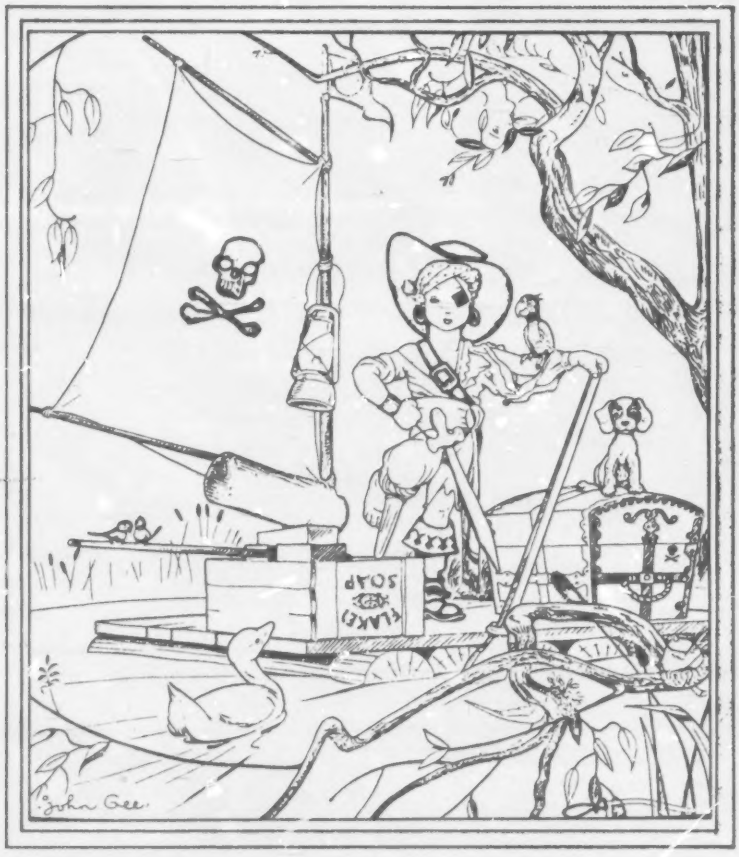
Teachers' Guides

The following museums have developed teachers' guides used in connection either with programs given

The Odyssey

APRIL 1973

A PUBLICATION OF THE JUNIOR CENTER OF THE VALENTINE MUSEUM



HIDDEN PICTURE . . . find the boy's mother, bug, bird, lobster, apple, musical note, acorn and sickle.

in the museum or with extension materials:

The Arizona State Museum
The Braintree Historical Society
The Children's Museum
The Colorado State Museum
The Hagley Museum
The Historical Society of Delaware
The Milwaukee Public Museum
The Minnesota Historical Society
MUSE
The Museum of African Art
The Museum of New Mexico
The New York State Historical Association
The University Museum
The Valentine Museum

The publications usually contain background information about the materials or the program as well as activity suggestions. The best of the guides give concrete suggestions for helping the teacher to relate the museum experience to classroom studies.

OTHER MATTERS

INTER-MUSEUM COOPERATION

For many years, museum educators have been urged to increase their efforts to plan and work together. As long ago as 1938, Grace Fisher Ramsey, in her Educational Work in Museums of the United States, called for more exchange of information among those in the field so that "methods successfully developed by one may be tried by others." A recent advocate of increased cooperation is Mrs. Barbara Newsom in a report issued by the Council on Museum Education, an organization working in 1972 and 1973 with the support of grants from federal and private foundations to study some of the problems of museum education:

> If museum education in any city or region were regarded whole and museums as a result were given incentives to share ideas and learn from each other's work, perhaps permanent progress could finally be made in areas that individuals have been pecking at piecemeal in this country for the better part of a century.[1]

If a state of community-wide cooperation and communication could be reached in a given locale, duplication of effort could be alleviated there and resources and services shared to the benefit of everyone concerned. In two cities visited -- New York and Washington, D.C. -- education staff members from the various museums have formed cooperative organizations with these ends in view.

Museums Collaborative

The New York group, Museums Collaborative Inc., was established in 1970 by New York City's Department of Cultural Affairs for the twofold purpose of (1) decentralizing museum resources

[1] Barbara Newsom, Study Report #1, p. 7.

and using them in "new ways with new audiences" and (2) easing some of the tasks of education departments through such collective services as joint fundraising and information exchange. The organization has a full-time staff of five and is supported by the New York State Council on the Arts, private foundations, and federal grants. Participating members include twenty-five cultural institutions. The Collaborative's Board of Trustees represents museums, schools, and the business community.

As one of several means of reaching into the community, the Collaborative has been working to set up permanent cultural resource centers that will be directly related to the school curriculum and maintained by the schools. Currently three centers are under development. The stated purpose of these is to provide places for "museum resources, local community artists, and school needs to come together...free from the constraints of museum and classroom."[2] The first to open will be the Heritage Museum, to be housed in a renovated theatre in New York's School District 12. The Museum's permanent and traveling exhibitions will relate to the cultural traditions of Africans and Puerto Ricans. Money for development of the Museum came from the New York Community Trust ($14,000) and the National Endowment for the Humanities ($33,000). An annual operating budget of $100,000 will be provided by District 12. Six member museums of the Collaborative -- the Metropolitan Museum of Art, the Museum of Primitive Art, the Brooklyn Children's Museum, the Museum of the American Indian, the Brooklyn Museum, and the American Museum of Natural History -- have contributed exhibit materials and curatorial information to the project.

Collaborative services for museum educators include the publication of a directory of art and

[2] Museums Collaborative, Inc., Background Information and Current Program, p.7.

museum courses available to high school students in New York City and of a newsletter for museum education staff members; consultation with schools and community groups on the use of museums; the writing of a column on museum exhibitions and services for a United Federation of Teachers newspaper; informal job referral for individual and institutions; and fund-raising for community-oriented projects designed by museums.

Museum Education Roundtable

The Washington, D.C. group, Museum Education Roundtable (MER), is a nonprofit corporation founded in 1969 for the purpose of developing the use of museums as educational resources. Governed by a Board of Directors and employing one full-time staff member, MER currently is supported by a $10,000 grant from the National Endowment for the Arts. Through monthly meetings, periodic newsletters, and a Directory of Educational Opportunities in the Washington Area, the organization works to foster cooperation among museums and between museums and schools. Membership of approximately one hundred includes educators from twenty museums. Close to 25 percent of members are teachers. A current project is a series of six day-long workshops in which invited participants explore approaches to such widely-shared concerns as docent training and the preparation of pre-visit and post-visit materials.

The Directory of Educational Opportunities in the Washington Area provides, in the format shown here, basic information about the services of sixty-nine museums and related institutions. It was published in 1972 with a $5,000 grant from the Hattie M. Strong Foundation, has been distributed free to all schools in the D.C. vicinity, and will be enlarged in 1973 to include more institutions.

Afr

Museum of African Art (and Frederick Douglass Institute)

316-318 A St. N.E., Capitol Hill
Washington, D.C. 20002

M F 10 a.m.-5:30 p.m.;
Sat. & Sun. 12:30-5:30 p.m.

Collection: Traditional African Art. African musical instruments. African textiles. African ethnological material. Exhibits on Afro-American history. 19th & 20th century Afro-American artists. Frederick Douglass Memorial Room with photographs, documents, memorabilia.

Tour Information: Through art, music, dance, African folk-lore and children's games, the rich and ancient culture of Africa is brought to life. Experienced lecturers both Africans, and Americans who have lived in Africa help to demolish the false ideas of the past and to build a new understanding of the African heritage. General orientation tours on African art and culture for all age groups pre-school through college and adult. Specialized lecture-demonstrations, with group participation, on African music and dance. Special programs for pre-school children including story-telling, drumming, singing and participation in African children's games. Special programs arranged for handicapped and retarded persons and for participants in rehabilitation programs. Discussions for groups with particular interest in art. Orientation programs on African art and culture for teachers. Lecturers will tailor presentations to meet age level and special interests of groups.

Additional Information: Group tours are arranged by appointment only. Please telephone in advance: 547-7424. Admission by voluntary contribution. Group size: 15-50 persons. Extension services are available for schools and other groups including: assemblies, classroom programs and slide lectures. The museum also offers a wide range of books, and pamphlets on African art and culture and Afro-American art and history. Reproductions of African sculpture. Slide kit: "Values in Traditional African Art", "Afro-American Panorama," a pamphlet highlighting the contributions of 53 important black figures in American history, is also available. Curriculum materials on African art and culture are in preparation

Contact: 547-7424

Agr

Agricultural Research Center

Beltsville, Maryland 20705

M F: 8-4:30 p.m.; Closed weekends and holidays

Collection: Current research projects in animal and plant science and related subjects are visited. Seasonal variations occur, particularly in the plant-science projects. Animal-science projects remain more stable. Special subject-matter interests of groups are accommodated so far as possible.

Tour Information: Tours require 1½-2½ hours, depending on wishes of group. Group size may vary. For 5-15 persons, private cars may be used. For 16-40 (max.), a bus must be chartered by the group. Student groups from 4th grade through college are scheduled; however, science-oriented classes are likely to benefit most from the tours. Reservations must be made by phone or mail 4-8 weeks in advance.

Additional Information: Progress reports on agricultural research and other publications are given to interested visitors. Single copies of teaching materials called "Science Study Aids" produced by the Agricultural Research Service are available free to teachers visiting Beltsville or by mail from: Information Division, Agricultural Research Service, USDA, Washington, D.C. 20250

Contact: Mrs. Virginia Griffin, Tour Coordinator: 344-2483

Air

National Air and Space Museum (SI)

900 Jefferson Drive, S.W.
Washington, D.C. 20560

10-5:30 p.m.

Collection: Major items from the Smithsonian's aeronautical and astronautical (space) collections, from the Wright Brothers to the launch vehicles, spacecraft, and lunar samples of the Space Age.

Tour Information:

Man Learns to Fly: The development of successful flight with heavier-than-air vehicles is re-enacted with the Wright Brothers' plane, Lindbergh's *Spirit of St. Louis*, Robert Goddard's rockets, and the U.S. Air Force's X-1 and X-15 experimental aircraft.

A page from the MER Directory.

POSTSCRIPT

The programs described in this study cover a range of subjects and are supported by budgets of widely-varying sizes. In retrospect, it seems to me that the most successful share a number of things in common that contribute to their effectiveness, quite apart from subject matter or cost.

First, all have clearly-defined objectives. In each case, staff members have decided exactly what is to be gained from the experience and why, and the program is taught with these aims in mind.

Second, all relate to the child's personal experience, leading him to see the relationships between his own milieu and the culture or period under consideration.

Third, all are taught by people who have a command of their subject and therefore the self-confidence to encourage questions and discussion and the flexibility to adjust to different student interests and levels of understanding.

Fourth, all are predicated on the realization that in a museum, the object is the principal medium and that objects have an extraordinary power to communicate, leaving no need -- and no excuse -- for the long-winded explanation, the overwhelming "torrent of words."[1]

Finally, all are given at a leisurely pace, allowing youngsters the time to explore areas of special interest, to become involved with the sights, the sounds, and the feel of the exhibits, to make discoveries on their own.

For a child taking part in a program in which these elements are present, the experience is likely to be an eyeopener. That there is much to learn about a culture or a period from the pattern in a piece of beadwork, the smell of herbs drying, the shape of a handaxe, the taste of a

[1] Richard Grove, Museums and Education, p. 84.

hoecake, the rhythm of an African song, may come as a revelation that will lead to a life-long museum habit. There comes to mind a card dropped in the suggestion box of the Anacostia Neighborhood Museum by a grade school student following a tour of exhibits. "I suggest," read the card, "this is the most fun I've ever had."

MUSEUMS VISITED AND PERSONS
TO WRITE TO
FOR FURTHER INFORMATION

Afro-American Cultural Development Center, Inc.
520 West State Street
Jacksonville, Florida, 32202
(Mr. John Farmer, Director)

Arizona State Museum
University of Arizona
Tucson, Arizona, 85721
[Mrs. Susan Wilcox, Assistant
Curator (Education)]

Braintree Historical Society
General Sylvanus Thayer Birthplace
786 Washington Street
Braintree, Massachusetts, 02185
(Mrs. Gilbert Bean)

Children's Museum
Jamaicaway
Boston, Massachusetts, 02130
(Miss Phyllis O'Connell, Associate Director)

Colorado State Museum
200 Fourteenth Avenue
Denver, Colorado, 80203
(Miss Diane McDonough, Curator of
Formal Education)

Exploratorium
3601 Lyon Street
San Francisco, California, 94123
(Miss Sheila Grinell, Exhibits and Programs)

Fort Worth Museum of Science and History
1501 Montgomery Street
Fort Worth, Texas, 76107
(Mr. Lawrence E. Brown, Program Director)

Hagley Museum
Greenville
Wilmington, Delaware, 19807
(Mrs. Jane MacAdam, Coordinator of
School Programs)

Historical Society of Delaware
Old Town Hall
Wilmington, Delaware, 19801
(Mr. Dale Fields, Executive Director)

Milwaukee Art Center
720 North Lincoln Memorial Drive
Milwaukee, Wisconsin, 53202
(Miss Mary Rae, Curator of School Programs)

Milwaukee Public Museum
800 West Wells Street
Milwaukee, Wisconsin, 53233
(Miss Edith Quade, Director of Education)

Minnesota Historical Society
St. Paul, Minnesota, 55101
(Miss Viki Sand, Director of
Educational Services)

MUSE, The Bedford Lincoln Neighborhood Museum
1530 Bedford Avenue
Brooklyn, New York, 11216
(Ms. Nancy Paine, Curator of Collections
or Mr. Michael Cohn, Curator-Instructor
of Cultural History)

Museum of African Art
381 A Street, N.E.
Washington, D.C., 20502
(Mr. Crispin Chindongo, Education Coordinator)

Museum of the City of New York
Fifth Avenue at 103rd Street
New York, New York, 10029
(Mrs. Robert Nielsen, Curator of Education)

Museum of Cultural History
University of California
Los Angeles, California, 90024
(Mr. Raul Lopez, Curator of New World Collections)

Museum of New Mexico
Santa Fe, New Mexico, 87501
(Mr. Michael G. Warner, Coordinator of Education)

New York State Historical Association
Cooperstown, New York, 13326
(Mr. Milo Stuart, Chief of Education)

Oakland Museum
1000 Oak Street
Oakland, California, 94607
(Mr. Ben Hazard, Curator of Exhibits and Special Education)

Ohio Historical Society
Ohio Historical Center
Columbus, Ohio, 43211
(Miss Kathleen M. Fernandez)

Stovall Museum of Science and History
University of Oklahoma
1335 Asp Avenue
Norman, Oklahoma
(Mrs. Marge Farwell, Director of Education)

Thomas Burke Memorial Washington State Museum
University of Washington
Seattle, Washington, 98195
(Mr. William Holm, Curator of Education)

University Museum
University of Pennsylvania
Thirty-Third and Spruce Streets
Philadelphia, Pennsylvania, 19104
(Mr. Jeff L. Kenyon, Director of Education)

Valentine Museum
10501 East Clay Street
Richmond, Virginia, 23219
(Ms. Eleanor McGuire, The Junior Center)

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